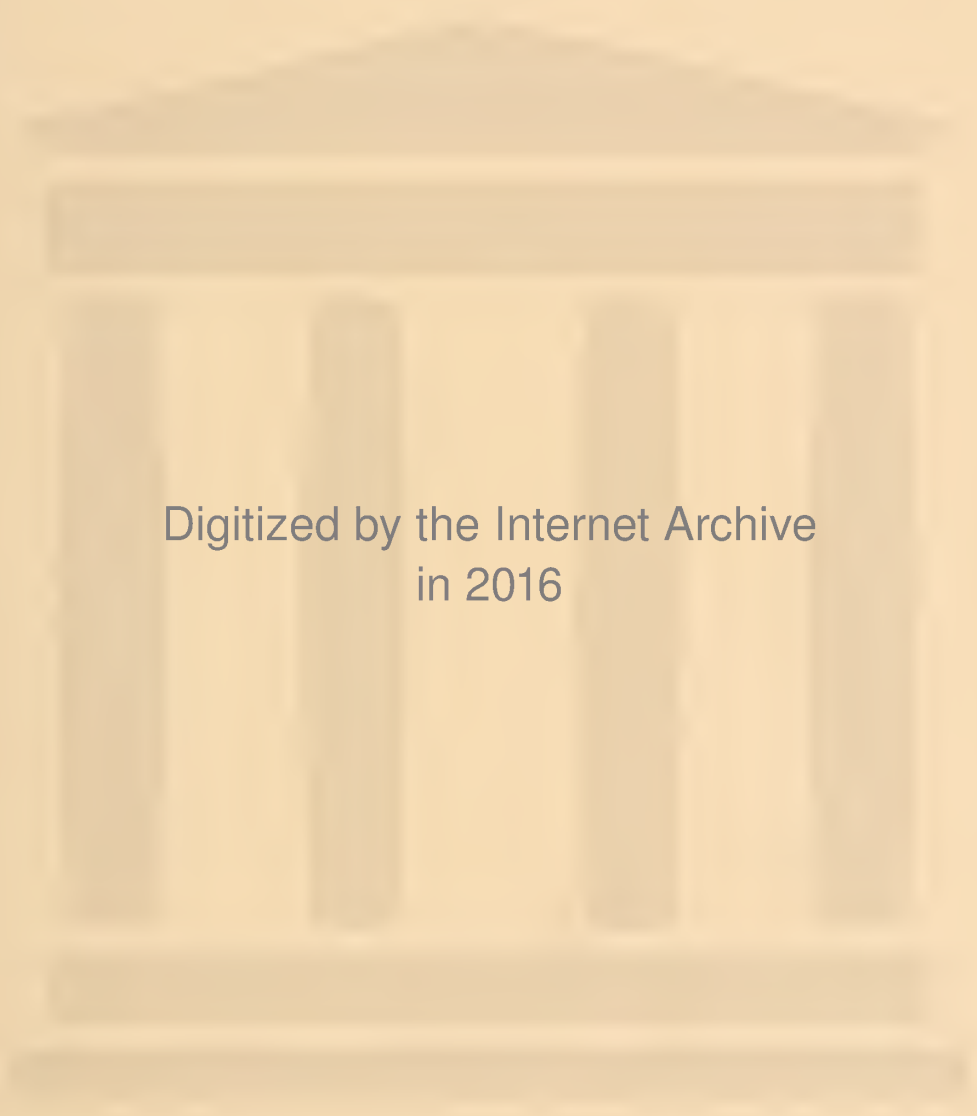


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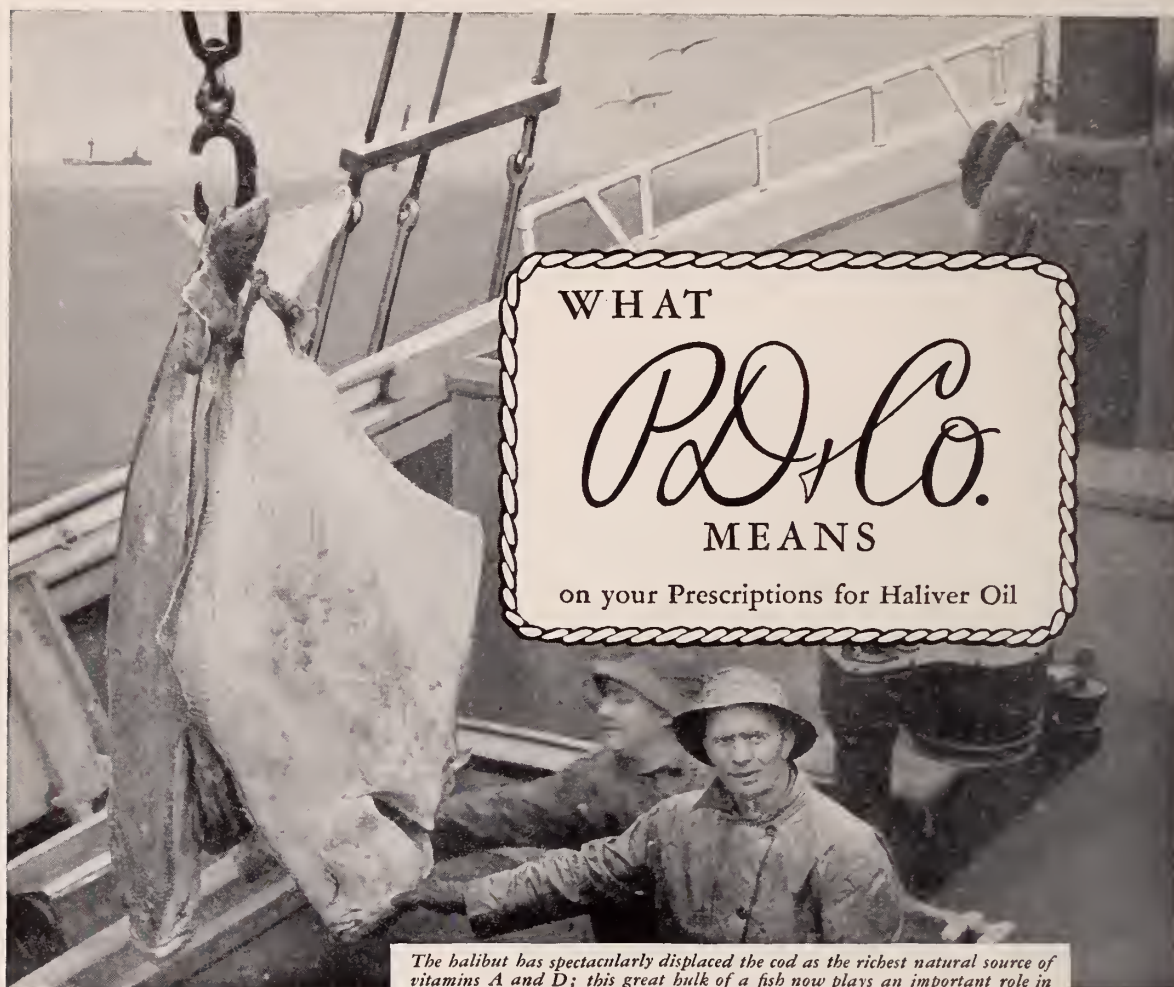
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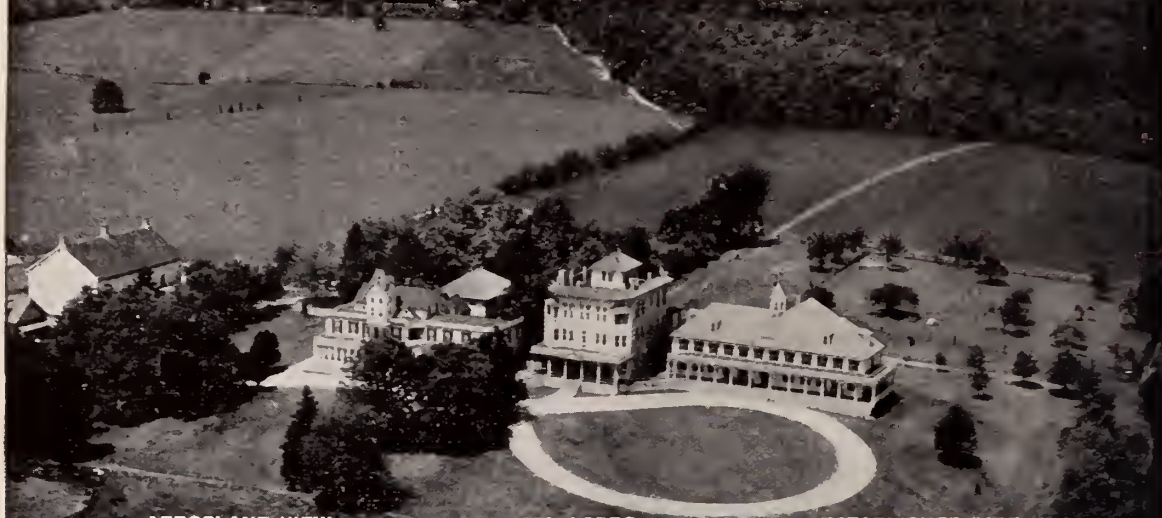
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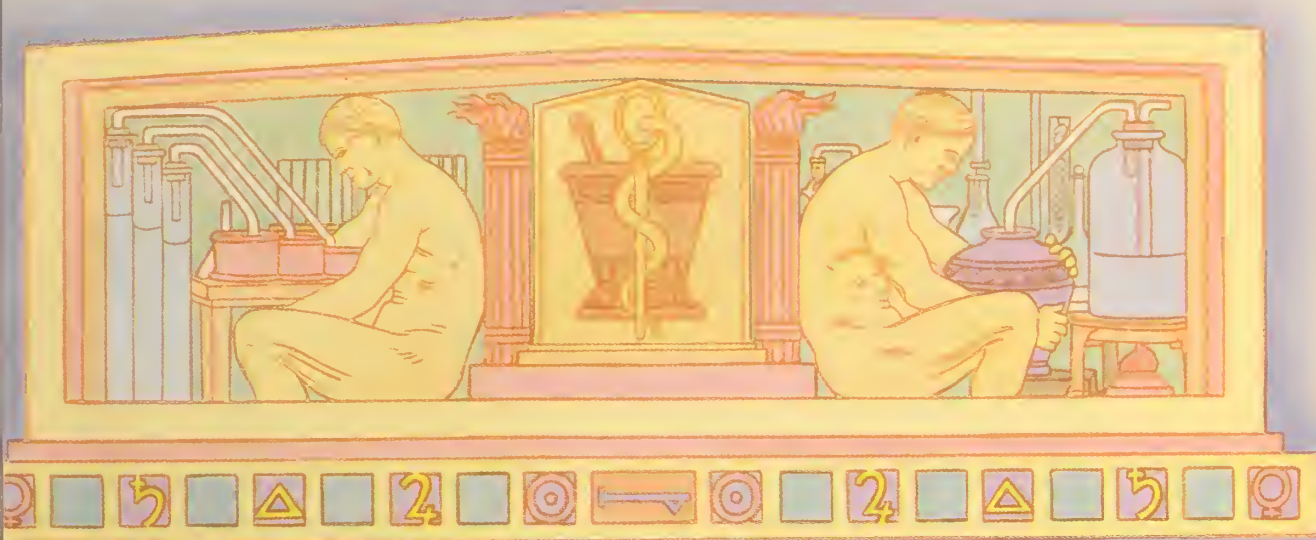
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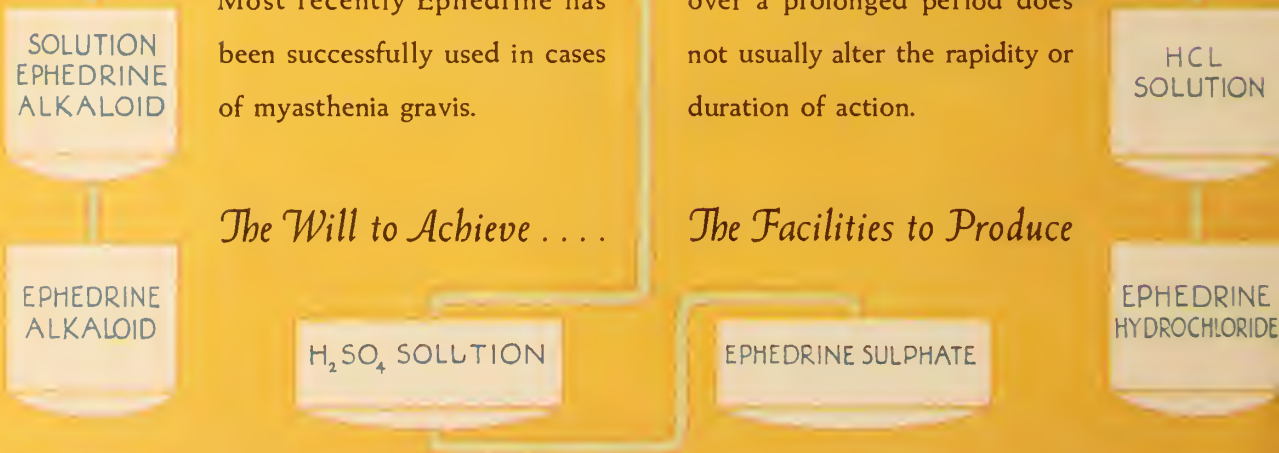


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INTRACRANIAL INJURIES OF THE NEWBORN

**From the Standpoint of the
General Practitioner***

P. BROOKE BLAND, M. D.

Philadelphia

INTRODUCTION:

The birth of a sound healthy baby is one of the most happy as well as one of the most fortunate events connected with motherhood.

On the other hand, the birth of a dead child or a neonatal death is almost invariably looked upon as an obstetric tragedy, though probably still more tragic is the birth of a child either hopelessly crippled or grossly deformed.

In considering injuries of the newborn in general, it may be said at the outset that damage, slight, moderate or severe, may be sustained by any structure from the dermal covering—as for example the omnipresent caput succedaneum—to the mucous lining, including in the intervening area the muscles, blood vessels, nerves, bony architecture, and the parenchymatous organs as well. It is thus observed that no tissue or structure is wholly immune.

The cutaneous envelope of the fetal body is exposed to abrasions, lacerations, and necrosis, leaving at times telltale marks of an indelible nature. In certain instances skin damage is followed by bacterial invasion and occasionally this may culminate in death.

The bony framework, from the vertex of the cranium forming the upper pole of the fetal organism, as well as those structures forming the inferior pole, may be the site of the gravest form of damage.

The vital organs within the thoracic cage, or those within the abdominal cavity, may,

likewise, sustain damage of a disabling or even fatal type.

Of the various forms of fetal birth trauma, both as regards the immediate and remote results, injury of the cerebrospinal system is probably the most frequent and certainly in all respects by far the most serious.

Numerous investigators have demonstrated that pathologic conditions arising in the early days of neonatal life are largely dominated by injuries sustained by the brain during delivery.

FETAL MORTALITY IN AMERICA

In studying the statistics of fetal mortality in this country, it is exceedingly disquieting to learn that each year approximately 150,000 infants are born dead or die shortly after delivery. This means that 12,500 babies succumb every month, 2,885 every week, 410 daily, 17 every hour or approximately one every three minutes throughout the year.

In the light of modern knowledge, it is quite safe to claim that one-half or more of these fatalities follow intracranial damage. This carries the implication that there occur annually 75,000 deaths, or one every six minutes, from injuries of the structures within the cranial cap.

It is altogether likely that many deaths heretofore designated as neonatal and stillbirths, especially those ascribed to that symptomatic state, asphyxia neonatorum, really resulted from gross damage of the vital organs inside the cranial cavity.

Apart from injury of sufficient gravity to result in stillbirth or neonatal death, there remains a vast world of little children, as well as of individuals of varying age, with bodies or brains, or both, hopelessly and permanently deranged. Herein is found one of the lamentable tragedies of childbirth, for literally intracranial damage leaves in its wake an end-

*Read before the Medical Society of Delaware, Dover, October 9, 1934.

less procession of the lame, the halt, and the blind.

It is not possible to state definitely how large this group is, but it probably includes thousands—thousands of children with bodies frightfully maimed and brains partially or wholly bereft of function—thousands doomed to remain helpless babies both physically and mentally so long as they live.

According to Edgar A. Doll, it is estimated that one per cent of the total population of the United States is mentally deranged. This indicates that there are approximately 1,250,000 mentally deficient individuals in this country.

According to the author quoted, it is believed that one-half to two-thirds of these individuals, especially the institutionalized, are of the so-called hereditary or primary types. Ten per cent of the secondary types, it is claimed, are due to birth injury. This means that roughly 125,000 cases can be ascribed to injuries sustained at the time of delivery.

LITERATURE

In recent years fetal birth trauma in general and trauma of the organs within the cranium particularly has been receiving some of the attention, long overdue, it actually deserves. Numerous articles have been published dealing with the trouble and, according to Ford, one of the first important contributions was made by Wehye, 46 years ago, who recorded the autopsy findings in 959 stillborn babies. In these intracranial hemorrhage was found in 122.

Since the publication in 1888 of the observations of the author cited, an ever-growing literature has developed, though it is interesting to note that this has appeared largely during very recent years. In a series of references recorded by Ford, totalling 136, all except 49 of the articles have been contributed since 1910, and it is further interesting to observe that more than 60 of these papers appeared between 1920 and 1927.

In another series of 64 articles dealing with the subject, quoted by Doll, 48 were published since 1918.

While a few papers were contributed, one by Kennedy, in 1836, and another by Mauthner, in 1844, it was the notable article published by W. J. Little, of England, that

directed special attention to the subject. This classical document was read at a meeting of the Obstetrical Society of London, on October the second, 1861, 73 years ago. It was entitled: "On the Influence of Abnormal Parturition, Difficult Labor, Premature Birth, and Asphyxia Neonatorum on the Mental and Physical Condition of the Child, Especially in Relation to Deformities." This is one of the most noteworthy contributions to scientific medicine of all time. It should be read and studied by every teacher, student, and practitioner of medicine.

In his presentation, Little also referred to what he designated as his first paper, which was published 17 years before.

The essayist probably had in mind the series of lectures—18 in all—which he delivered on Deformities of the Human Frame, at the Hospital for the Cure of Deformities, London, in the year 1844. In lecture 8 and 9, the latter especially, there is outlined a detailed description of the clinical features of spastic rigidity—now commonly called Little's disease—of muscles and deformities in infants, young children and adults.

The author attributed certain forms of spastic palsy and mental derangement to asphyxia. Apparently he did not appreciate the fact, as we do today, that asphyxia was a symptom rather than a cause of damage within the cranial cap. Little quite properly assumed that asphyxia was due to some interference with the placental circulation, and this he believed provoked the subdural and other types of intracranial hemorrhage. Although he does mention mechanical injury as a cause of spastic palsy, he evidently had no knowledge of, nor did he realize, the part played etiologically by primary obstetric damage within the fetal skull.

In his contribution he had shown that mechanical injuries of the head and neck following premature birth and difficult labor, in those instances where fetal life was preserved, though convulsions followed delivery, that the latter—convulsions—were apt to be succeeded by a determinate affection of the limbs of the child. This he designated spastic rigidity and ascribed as the cause "asphyxia neonatorum."

A feature of absorbing interest in connection with the study is found in his statement

that medical writers of the period seemingly were unaware that abnormal parturition, ending in recovery of the child, at times terminated in diseases or conditions that manifested themselves in a remote stage of life.

In closing the discussion of his paper, he stated that he was not able to find any references to birth injuries with their sequelae in the works of English medical writers. He, therefore, with confidence referred, he said, to Shakespeare and there he discovered the description of the physical deformity of King Richard the Third. This fitted precisely an individual afflicted with one kind of deformity originating at birth.

It is of interest to mention also in this connection that Sir Thomas Moore refers to the character of the birth of King Richard. His mother, the Duchess of Gloucester, Sir Thomas states, "had much ado in travail and that Richard was born with the feet forward," in other words as a breech delivery. It is pertinent to mention, also, that his birth was premature.

King Richard, in lamenting on his condition, is made in Act I by Shakespeare to say:

"But I am not shaped for sportive tricks,
Nor made to court an amorous looking-glass;
I, that am curtailed of this fair proportion,
Cheated of feature by dissembling nature,
Deformed, unfinished, sent before my time
Into this breathing world, scarce half made up,
And that so lamely and unfashionable
That dogs bark at me as I halt by them;
Why, I, in this weak time of piping peace,
Have no delight to pass away the time,
Unless to spy my shadow in the sun,
And descant on mine own deformity."

FREQUENCY

In a study of the literature regarding the frequency of intracranial injury, one naturally finds, as always, some discrepancy in the data recorded. Autopsy studies, according to Ford, disclose that the incidence ranges from 20 to 65 per cent. In certain conditions, as, for example, premature and immature babies, a much higher percentage is found and it has been determined that a varying degree of intracranial bleeding is present in 90 per cent of the cases associated with the conditions named.

This confirms the general assumption that prematurity and immaturity are very inti-

mately related to intracranial bleeding in an etiologic way.

It may be pertinent to mention at this time that in 63 cases of spastic rigidity and allied conditions recorded in that classical contribution of Little, the obstetric maternal histories refer to prematurity or complicated labor in nearly all.

Breech presentations, as already indicated, are accompanied by a much higher percentage of gross trauma with hemorrhage inside the cranial cavity than are vertex presentations.

During the past eight years, in my own clinic, intracranial hemorrhage has been responsible, as confirmed by postmortem investigation, for 14 per cent of our stillbirths and 13 per cent of our neonatal deaths. In other words, during this time, intracranial injury with hemorrhage we found was responsible for 27 per cent of our fetal mortality.

I am persuaded, however, that these figures do not represent the total percentage of the fatal cases of intracranial hemorrhage arising in our clinic. There were others, fetal deaths which I believe were unmistakably due to intracranial damage, but in these we were denied the opportunity of conducting autopsy investigations.

Apart from those cases of intracranial trauma of sufficient gravity to result in death, there are, besides, numerous instances in which injuries of a minor extent and unassociated with symptoms occur. Hemorrhage of varying degree is found in these babies. Indeed, it has been demonstrated by Sharp and others that routine spinal paracentesis of all newborn babies will reveal the presence of certain quantities of blood in approximately ten per cent of the patients. Ford claims that a very large percentage of babies dying during delivery, or shortly thereafter, show frank evidence of intracranial hemorrhage at autopsy. This opinion is shared by nearly all present-day observers. In only about one-third of the infants affected, however, is the bleeding of such proportions as to result in death.

MORBID ANATOMY

Passing on to the question of the morbid findings in cases of intracranial trauma, two conspicuous lesions of varying intensity usually are found: First, laceration of the dura

mater septa and, second, hemorrhage. In a certain number of instances, especially in the premature, bleeding is sometimes found without meningeal damage, and, conversely, injury of rather extended proportions of the membranes with bleeding wholly absent may also occasionally be observed.

Holland, in analyzing 167 fresh fetuses, found the tentorium cerebelli lacerated in 81 or 48 per cent. Laceration of the falx cerebri was found as an accompaniment in 5 of these specimens, but in spite of the extensive trauma, bleeding was wholly absent in 6 of the bodies examined.

SITE OF INJURY

With reference to the site of injury, we learned from our investigations that this may occur in almost any section of the dura mater septa, though in most instances we, as have Holland and many others, found that the tentorium cerebelli, just below or near its union with the falx cerebri, is most frequently damaged. Laceration may involve one or both sides of the tentorium and the tear may be incomplete or complete. In a certain number of instances, as has already been mentioned, injury of the falx is an accompaniment.

The configuration of the lacerations is variable. Some appear as simple slits. Others are found elliptical in outline. Some appear as oval perforations—fenestra—and still others as irregular ragged rents.

Laceration of the septa is nearly always associated with an outpouring of blood and this may be mild, moderate, or severe. While laceration without hemorrhage occasionally occurs, this is observed only in exceptional instances. In the majority of cases, vascular damage is an accompaniment of injury of the membranes, and at times venous trunks of large dimensions are torn.

Capon, quoted by Ford, found in an autopsy study of 80 stillborn babies the source of the bleeding as follows:

First, the cerebral veins near their terminations in the superior longitudinal sinus.

Second, the internal cerebral veins, the choroidal veins particularly, and almost exclusively in premature babies.

Third, the small nameless veins coursing through the fibers of the tentorium.

Fourth, the tributaries of and occasionally the chief trunk of the vein of Galen.

Fifth, the superior longitudinal, the transverse, and the straight sinuses occasionally.

In the main, however, it is the veins of small dimensions that are involved.

Holland, from his observations, believes that the principal source of hemorrhage is from the tributaries which the vein of Galen receives from the cerebellum and midbrain and, also from the cerebellar veins which enter the straight sinus.

The quantity of blood effused is variable. It may be mild, moderate, or profuse. In cases of severe injury the brain at times becomes literally flooded with blood.

Profuse hemorrhage, however, does not seem to be absolutely essential, in order to result in a fatality. Minute hemorrhage may be culpable. Microscopic bleeding, it has been demonstrated, is sometimes responsible for stillbirths and neonatal deaths.

For example, in 53 unselected cases, Hemmings and Canavan found in their autopsy studies, especially in the region of the medulla, 34 instances—64 per cent—areas of microscopic hemorrhage. In 12 of the babies examined these findings provided the anatomical cause of death, which otherwise would have remained unsolved. The investigation carried out by the authors mentioned confirms the view of Crothers, who has pointed out that damage of the medulla is the predominate factor in birth trauma.

MECHANISMS

Injury of the dura mater septa together with the vessels is brought about by intracranial stress and its mechanism, as described by Holland, is rather widely accepted. Intracranial stress is defined as a compound compressive stress which roughly may be regarded as consisting of two elements: first, a general compression of the whole brain and, second, a simple longitudinal compression by opposite forces acting at the ends of the long diameter of engagement of the head in the pelvis. With these forces operative, there is brought about alteration in the contour of the fetal head, together with overstretching of the septa of the dura mater (Holland).

For instance, in vertex cases and in the aftercoming head in breech presentations, the

anteroposterior diameter of the head is decreased, while the vertical diameter is increased. This alteration results in overstretching with attenuation of the falx, particularly at or near its point of junction with the tentorium, and it is in this region that gross damage most frequently takes place.

In face and brow presentations, there is a decrease of the vertical with an increase in the anteroposterior diameter of the head and this naturally brings about elongation and stretching in the lower free borders of the tentorium and falx. Hyper-attenuation in these circumstances must inevitably result in lacerations with fatal termination in a certain number of instances, and to a degree hitherto wholly unsuspected.

PREDISPOSING FACTORS

The consideration of the etiology of intracranial damage would be wholly incomplete without some reference to the factors chiefly concerned in a predisposing way.

These briefly may be summarized as follows:

First, it has been demonstrated that parity is influential in a certain number of instances, because it has been observed that the accident is considerably more frequent in the first than in subsequent labors and this is especially true with the birth of male children.

Second, intracranial damage, it has been found, is prone to occur in prolonged and difficult labor, as is encountered in contracted pelves with delivery occurring either spontaneously or otherwise.

In this connection it should be mentioned parenthetically that judicious instrumental delivery seems to be far less likely to be followed by intracranial damage than in unwisely governed spontaneous labor. It is the long, unduly drawn-out stress of spontaneous and not the relatively short stress of forceps delivery that is most likely to inflict damage of a serious character intracranially.

Third, predisposition naturally is favored in technically difficult and imprudent forceps delivery.

Fourth, it has been found that in complicated breech delivery, especially in cases associated with hasty, unskilled extraction of the after-coming head that damage is especially likely to occur. This method of delivery is re-

garded as accountable in a large number of instances of brain injury. (In the 168 fetuses examined by Holland, breech delivery was held as causative of intracranial damage in 47. In this series, laceration of the tentorium cerebelli was found in 37 cases, or in approximately 75 per cent.)

Fifth, the lesion is also far more frequent in premature and immature infants, due, first, to the fragility of the blood vessels, and, second, to incomplete anatomical development of the strengthening fibers of the tentorium. Prematurity and immaturity must, therefore, be looked upon etiologically as among the chief predisposing factors.

Sixth, in difficult delivery of the after-coming head following version. This is operative, it has been found, in a large number of instances and, hence, accounts for a certain number of cases in a predisposing way.

Seventh, the indiscriminate use combined with excessive dosage of pituitrin to stimulate uterine contractions in the second stage of labor has been a rather potent source of damage of the brain and its enveloping membranes in a definite number of cases.

Eighth, biochemical changes in the blood, as well as constitutional disease, syphilis for example, have been mentioned as predisposing, but these conditions are by most observers not credited with special etiologic importance. However, it seems reasonable to assume that a hemorrhagic tendency verging on the pathological may become a factor of predisposition in some cases.

As a matter of record and interest, the recital of some personal observations made in my own clinic as regards operative delivery might not be amiss at this time.

In 4,631 consecutive deliveries there occurred 49 fatal cases of intracranial hemorrhage, a fetal mortality from this source of about one per cent.

The character of labor in relation to the fetal mortality is portrayed in the following table:

Total Number, With Character of Cases Delivered	Number of Cases of Intracranial Hemorrhage	Fetal Mortality
Spontaneous	4020	14
Forceps	382	13
Breech	174	11
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		20

For fear of consuming more than the usual

period of time allotted for this presentation and trespassing thereby on the time set aside for general discussion of the topic, it is obviously not possible to consider many other intimate and important features of the problem.

With reference to the symptomatology and diagnosis, I can only in a very brief way mention that intraeranian damage is characterized by a rather sharply defined clinical portrait, delineated by an apathetic listlessness; perturbed respiratory function; cyanosis varying in intensity and duration; nystagmus, especially in severe cases, of an impressive and arresting type; a firm, tense, bulging large fontanel; convulsive seizures of the Jacksonian type, flaccid palsy in the muscles affected with convulsive seizures; indifference or refusal to nurse; an appealing, plaintive cry; dysphagia (20 per cent); and a varying degree of fever.

With a clinical profile so typical, especially one combined with a history of primiparity, a large male child and a tedious, difficult delivery, spontaneous or instrumental, the diagnosis should be made forthwith. Indeed, with symptoms of the mildest sort, or no symptoms at all, following a difficult, complicated delivery, the possibility of intraeranian injury should always be called to mind. Confirmation of one's suspicions in a rather clinically clear type of case, or in one of a suspected nature, is readily made by spinal puncture.

With reference to the remote sequelae of intraeranian damage, with or without hemorrhage, I feel it incumbent to once more follow the dictates of brevity and simply say that gross injury of the delicate structures within the fetal skull, unless successfully counteracted, inevitably leads to cell destruction with altered function, both physical and mental, of a permanent character.

Notwithstanding the observation that there is still some controversy as to the etiological relationship of birth trauma—intraeranian injury—to various neuropsychiatric states, including the spastic paralyzes in children with or without amentia, it is, nevertheless, most significant that in all or nearly all children illy organized one finds, in a large number of instances, a history of prematurity or difficult labor, or both.

In the literature dealing with the spastic paralyzes of children, there are mentioned generally three etiological factors: (1) maldevelopment of the neurones; (2) inflammatory processes as found in encephalitis; and (3) most conspicuous of all, destruction of the neurones from minor or gross hemorrhage.

It seems clear that severe injury is quite capable of bringing about sequelae of a serious nature.

Doll claims that all possibilities considered, the following position in regard to birth injury seems justifiable:

"1. While it is at present difficult to reach any conclusions as to the actual percentage of children with neurological and mental handicaps who owe their defects to injury at birth, it yet seems generally agreed and reasonable that some children do survive cerebral hemorrhage and carry through life the marks in varying degrees of neurological disorder and mental retardation.

"2. That such cases are probably more frequent than has been realized heretofore is the trend of the most recent and authoritative investigators. This is because of the tendency of the early physical symptoms to clear up and be forgotten, and when the defective development is observed at six or seven months of age, it is often assigned to some other cause.

"3. It appears reasonable and probable that cerebral hemorrhage of degrees insufficient to cause death and even insufficient to permit detection in the early behavior of the infant, due to lack of development of the cortical cells at that time, are yet sufficient to obstruct normal development and show in later deficiency.

"4. While the motor disturbances, particularly spastic paralysis, are unquestionably the direct result of the hemorrhage in these cases, there is yet room for question in any particular instance, whether the mental retardation is directly related to a widespread process of cell destruction which also caused the paralysis, or whether the mental deficiency is caused by the restrictions in ideational expressions which the paralysis imposes.

"5. It does not appear unlikely that injury which does not affect the motor areas may simulate other forms of cerebral deficiency

and be mistaken for primary amentia of any degree from moronity to idiocy.

"6. Birth hemorrhage may now and then be responsible for hydrocephalus, though this is probably rare.

"7. Secondary epilepsy may be one of the results of cerebral hemorrhage. (Stratling states, "that the old lesions of an infantile cerebral hemiplegia are among the most frequent found in the brains of epileptics and further: we are reasonably safe in saying that fully 40 per cent of all the cerebral hemiplegies of infancy ultimately become epileptic.")

"8. It is more than likely that a cortical hemorrhage which does not affect the motor centers may be responsible for personality deviations, especially noticeable in distractibility and irritability."

MANAGEMENT

Passing on to the therapeutic management of intracranial injury as encountered in everyday practice, the most dependable of all measures is prevention, and this may be summarized as follows:

1. Scrupulous antenatal supervision with the view of recognizing and eliminating complicating conditions which may lead to serious difficulty at the time of labor, recalling in this regard the age-old axiom, "to be forewarned is to be forearmed."

2. The avoidance of undue intracranial stress from the imprudent use of oxytocics, as for example pituitrin.

3. The evasion whenever possible of all difficult manual and instrumental deliveries and the performance, in all threatening cases, of elective abdominal delivery instead.

4. The avoidance in all cases of hasty, antiquated manual means in the extraction of the after-coming head in breech cases.

5. The routine employment of the Piper forceps in the delivery of the after-coming head in all difficult breech deliveries, and in the extraction of the after-coming head following the operation of version.

6. The stimulation of respiratory function by the administration of carbon dioxide and oxygen in all newborn babies showing signs of respiratory embarrassment.

7. The regular practice of cisternal or spinal paracentesis in infants subjected to un-

due cranial stress is prolonged, difficult, and complicated labor.

8. The repetition of cisternal or spinal paracentesis once, twice, or even thrice daily—by trained hands—in all infants showing free blood in the spinal fluid.

9. The intra-gluteal or intra-peritoneal injection of human blood—10 to 20 cc—in all newborn babies displaying symptoms and signs of intracranial trauma with hemorrhage.

10. The maintenance of fluid balance by the hypodermoclytic administration of saline solution with glucose—5 per cent—in quantities of 20 c. c. repeated every 4 or 6 hours.

As a means of emphasizing the importance of prophylaxis in the therapeutic management of intracranial damage of the fetus, may I finally direct attention to the phenomenal achievements which have followed the institution of preventive resources in certain types of organic disease.

In tuberculosis, for instance, the attainments have been almost unbelievable, and only recently a renowned authority, Doctor Lawrence F. Flick, stated that within the short span of 20 years tuberculosis will be unknown in the city of Philadelphia. This, of course, applies to the country as a whole.

Unhappily, thus far no concerted or effective efforts have been made to overcome the frightful mortality and still worse the harrowing disability resulting from injuries of the fetal brain of the newborn, although gross damage of the fetal cranium with its contents is far more amenable to preventive means than is bacillary infection of the lungs.

When this gradually growing conviction becomes widely known, and prophylactic methods become thereby more zealously practiced, would it not be logical to assume that grave intracranial injuries of our posterity would likewise become if not wholly eliminated, almost unknown? "Tis a consummation devoutly to be wished."

INFANT NUTRITION

With Reference to Lemon Juice Feeding*

JOHN B. BAKER, M. D.

Milford, Del.

To quote Holt and McIntosh¹, "nutrition in its broadest sense is the most important

*Read before the Medical Society of Delaware, Dover, October 9, 1934.

branch of pediatrics. Thus it is absolutely essential that we have a knowledge of its fundamental principles, if we are to apply preventive and corrective measures intelligently."

Our best guide as to the adequacy of nutrition is the character of growth. Each infant must be handled as an individual and treated as such, because there is a great variation in the growth and development, depending upon the race and the family to which the child belongs, some children tending to be large while others are small. Therefore average figures for weight and measurement should be taken as a guide and not as a standard.

Tyson¹ says "the old idea of infant feeding was a rather hit-and-miss affair, with many trials and many errors." Today we try to avoid any "hit-and-miss" method and base our feeding on definite, known requirements.

These known requirements for which we must supply enough calories are²:

- (1) the basal or maintenance metabolism
- (2) the growth needs
- (3) the needs for muscular activity
- (4) the food value lost in the excreta

Different workers give slightly varying figures for the average needs. Faber³ lists them as follows:

- (1) for basal metabolism, 45 to 50 calories per kilo of body weight.
- (2) for growth needs, 40 to 20 calories
- (3) for general muscular activity, 20 to 30 calories
- (4) for work of digestion, 4 to 6 calories
- (5) for loss as excreta, 8 to 12 calories

For our purpose it is suffice to state that the young infant needs about 55 calories per pound of body weight, while older infants need about 45 calories per pound of body weight. Thus we see it is the calculation of the number of calories which the infant receives that tells us whether the infant is being over or underfed. Thus in trying to arrive at the amount of food needed, we first calculate the amount needed for average weight and age of the infant.

An adequate diet must contain the basic elements of protein, fat, carbohydrate, mineral, water, and vitamins.

Proteins are essential to body growth and repair. All proteins do not have the same

value in nutrition because some proteins do not contain the essential amino acids. Therefore the amount of protein needed by the individual depends on the character of the protein.

If breast milk is given the protein requirement is 25 gm. of protein per kilo⁴. This is because breast milk contains lactalbumin, which is a complete protein. Cow's milk protein is mostly casein, which is poor in amino acids, especially cystine. Thus infants fed on cow's milk should receive 3 gm. of protein per kilo⁴.

When insufficient proteins are fed⁷ the infant is retarded in growth, the circulation is poor, the musculature becomes flabby, there is an increased susceptibility to infection, and at times an anemia. At other times there is a nutritional edema. If too much protein is fed there occurs an increased secretion of alkaline intestinal juices, and the stools become constipated.

A certain amount of carbohydrate is necessary for the maintenance of life. The minimum amount is 3 grams per kilo of body weight, or 0.05 oz. per lb. The optimum amount is 8-14 grams per kilo of body weight of 0.13 to 0.22 oz. per lb. Carbohydrates supply, therefore, not only the necessary calories not furnished by protein and fat but they are also necessary to complete the oxidation of fats.

Under normal conditions carbohydrates are absorbed only as monosaccharides. The conversion of carbohydrates to monosaccharides occurs in the intestine. After absorption monosaccharides are built into glycogen, which is stored in the liver and muscle if not needed for energy requirement; any excess of carbohydrate may be converted into fat.

Too high a carbohydrate content may lead to a diarrhea, although this is not always true. If too much carbohydrate is fed, as in condensed milk feedings, the infants are flabby, often develop rickets, and have very little resistance to infection. The deficiency of protein and fat in this feeding is probably just as important as overfeeding with the carbohydrate.

Lactose⁸ would seem to have a theoretical advantage over the other sugars, but it does not. One advantage is that it is not so sweet as other sugars or karo. It reaches the lower

part of the intestinal tract and occasionally exercises a more laxative affect.

Cane sugar is used widely. It is fermented by yeast. It is not as laxative as lactose. It has the disadvantage of being very sweet.

Dextrin is not fermented by most intestinal bacteria; it is easily converted into maltose, but the conversion does not appear to take place more rapidly than the maltose can be absorbed and digested. Karo is a mixture of dextrins, or dextrose and maltose. Mixed sugars have the advantage that a large amount may be fed without danger of diarrhea.

Fats are the most important source of animal heat, the normal breast fed infant receiving about one-half of his calories in this form. In bottle fed babies this amount of fat is neither necessary nor desirable. Von Groer⁹, in Vienna, attempted to rear infants upon a fat free diet. He found it practically impossible, as the fat was needed to carry the fat soluble vitamin. Before fat can be absorbed from the intestinal tract it must be saponified¹⁰. It is absorbed as fatty acids and glycerine. It reunites, after passing through the intestinal wall, to form neutral fat.

The amount of fat used depends upon the state of nutrition and the amount of other food fed. A certain amount of carbohydrate should be present to help metabolize the fat. Due to its high caloric value fat serves well to make up the energy requirements.

The vitamins A and D are associated with the fat of milk. A diet poor in fat leads to vitamin deficiency, and causes the protein and carbohydrate to be increased to provide the necessary calories. Excessive fat depresses the appetite, impairs gastric secretion and motility, and increases the tone of the pyloric sphincter.

In addition to protein, fat, and carbohydrate, mineral matter is essential to the diet of the infant.

They are the chief constituents of the body fluids and cells, play an important part in the growth of bones, and furnish material from which the mineral part of the blood and digestive tissues are formed.

Potter¹¹ states that the most important salts are chlorides, phosphates, and the combinations of sodium, potassium, calcium, magnesium and iron. Sodium and chlorine are the

chief constituents of the body fluids. They are absorbed from the intestines and only a small amount is found in the stool. Any excess in the body is excreted in the urine. Their chief functions are to maintain osmotic pressure and to give minerals to form the gastric and intestinal juices.

Potassium is the chief constituent of body cells. There is enough potassium in both human milk and in cow's milk to meet the requirement of the infant. Thus it is not necessary to administer added potassium.

Calcium is essential to maintain the proper growth of bones and to prevent tetany. The amount of calcium absorbed and retained in the blood or deposited in the bones is influenced largely by the amount of antirachitic or D vitamin in the diet. Either 2.5 oz. of human milk or 1.5 oz. of cow's milk per pound of expected body weight furnishes enough calcium for the normal requirement.

Magnesium is present in small quantities in bones, muscles, and blood serum.

Iron forms the essential part of the hemoglobin molecule. Holt¹² states that after the seventh month it is advisable to give iron to help prevent anemia.

Copper, the exact function of which is not yet determined, seems to have a catalytic action upon the synthesis of hemoglobin.

Phosphorus is an important part of the body cell and is abundant in nerve tissue. Inorganic phosphates are the chief mineral constituents of bone. Acidity favors the absorption of phosphorus, as does vitamin D and ultra-violet light.

Sulphur is present in a number of tissues. Glutathione is present in nearly all tissue in small amounts, and plays a part in physiological oxidations.

Water makes up 80 to 90 per cent of the diet. It is needed for the solution of certain parts of food¹¹ and for the suspension of proteins and the emulsification of fats. The water requirement is considerably influenced by the food. The optimum requirement is 125 to 150 cc. of water per kilo of body weight each day, or 2 to 2¼ ounces per pound of body weight per day. This provides a liberal margin of safety and infants may tolerate warm weather and attacks of febrile disease.

Retention of water is influenced by the administration of salt. Sodium salt aids the retention of water, and calcium and potassium have the effect of withdrawing it. Symptoms of acute dehydration—fever, prostration and loss of weight—appear when the water intake drops to one-half or one ounce per pound of body weight. There is no advantage in increasing the water intake over the value stated, as it merely causes an increased flow of urine.

Vitamin A³ is present only in fats, being the most abundant in milk. A deficiency of vitamin A causes malnutrition and lowered resistance to infection, the eyes have a conjunctivitis with softening and ulceration of the cornea.

Vitamin B, a water soluble vitamin, is abundant in brewer's yeast. The absence of vitamin B leads to polyneuritis. It is thought by some observers that loss of appetite and malnutrition are vitamin B deficiencies.

Vitamin C is the antiscorbutic factor. It occurs in citrus fruits, particularly in orange and lemon juice. Tomato juice and cabbage also contain it. Milk dried in vacuo contains practically all its vitamin A but little Vitamin C. Orange juice may be started early, using a small amount in the beginning and gradually increasing the amount until sufficient is being given.

Vitamin D is the antirachitic factor and is fat soluble. Vitamin D is not always essential as we can expose the body to sunlight or to ultra-violet light from some other source. Ultra-violet radiation of the skin activates the ergosterol in the skin, thus producing the antirachitic effect. The infant's need of vitamin D is quite generally recognized. Often viosterol is started as early as the second week after birth. In one institution it is started a few days after birth in some babies. Cod liver oil is one of the best sources of vitamin D and in addition, vitamin A. Viosterol is an irradiated oil and supplies vitamin D only.

I believe all pediatricians and practitioners interested in infant nutrition will agree that the milk of the mother is the best for the offspring. It is the natural and ideal method for feeding the infant. The White House Conference¹² reports that breast milk must be considered better than the best artificial

food for the first few months of life. Breast milk is more readily digested, contains fewer bacteria, and it avoids certain economic and social difficulties. However, there are many occasions on which one must feed the infant artificially. Thus we may choose the feeding best suited. Whenever possible, cow's milk is employed.

All milk should be boiled unless it comes from a certified dairy. Herd milk is more nearly constant in composition and should be fed in preference to milk from a single cow. One of the problems we meet here is that our milk supply is not reliable, especially on the farms. I mean by this that we cannot be sure of its composition, as in one family the milk may come from a Jersey cow, while at another farm the milk comes from a Holstein cow, while at another it may come from just plain cow. Often the cattle are not tuberculin tested, especially on the smaller farm. One of our local veterinarians has informed me that undulant fever is common in many herds. Frequently the children have gastro-intestinal upsets from drinking the milk from a cow newly turned on pasture. Also, I have seen several cases where children had gastro-intestinal upsets from drinking the milk of cows newly fresh.

I believe that the majority of the milk obtained from our local dairies in our small towns is adequate for infant feeding. However, lately, for some of the reasons stated above, I have been using evaporated milk in infant feeding and also because its fat is homogenized, its curds are softer and smaller, and it is easy to digest.

The minimum amount of whole cow's milk to be fed is 1½ oz. with an optimum of 2 oz. per pound of expected body weight and from ¾ to 1 oz. of evaporated milk to the pound of expected body weight, and with 1/10 oz. of carbohydrate per pound per day. In the early period of infancy, the first two months, 7 feedings daily with a 3-hour feeding interval during the day and a 4-hour interval during the night, will meet the need. Some men prefer to carry this time arrangement through the third month. Often, however, the child will drop the 2 A. M., feeding by the time it is two months and sleep through the

GROUP I—DIARRHEA

Whole Milk and Lemon Juice

Name	Birthday	Start	End	Gain
J. M.	6/ 4/33 9 lb. 2 oz.	10/ 1 10 lb. 8 oz.	1/ 5/34 16 lb. 10 oz.	6 lb. 2 oz.
B. J.	5/14/34 7 lb. 8 oz.	6/25 8 lb. 13 oz.	10/ 4 14 lb. 2 oz.	5 lb. 8 oz.
Hay.	3/10/34 7 lb. 8 oz.	6/23 10 lb. 12 oz.	9/22 16 lb. 6 oz.	5 lb. 10 oz.
C. A.	6/15/33 8 lb.	10/12 10 lb. 14 oz.	12/ 2 15 lb.	4 lb. 2 oz.
TTH	2/23/34 10 lb. 4 oz.	2/23 10 lb. 4 oz.	6/22 15 lb. 11 oz.	5 lb. 7 oz.

GROUP II—DIARRHEA

Evaporated Milk and Lemon Juice

E. A.	8/ 1 7 lb. 7 oz.	8/12 9 lb. 8 oz.	1/24/34 15 lb.	5 lb. 8 oz.
E. M.	3/10 7 lb. 7 oz.	5/26 10 lb.	8/29 14 lb. 13 oz.	4 lb. 13 oz.

GROUP III—WELL

Evaporated Milk and Lemon Juice

V. R.	6/ 7/34 8 lb.	7/25 9 lb.	9/27/34 12 lb. 5 oz.	3 lb. 5 oz.
C. C.	5/15/34	6/28 8 lb. 11 oz.	9/27/34 14 lb. 14 oz.	5 lb. 13 oz.
W. K.	7/ 7/34 8 lb. 12 oz.	8/ 3 9 lb. 13 oz.	10/ 4/34 13 lb.	3 lb. 6 oz.
W. B.	12/ 8/33 5 lb. 14 oz.	1/ 8/34 7 lb. 13 oz.	4/11/34 15 lb. 8 oz.	7 lb. 11 oz.

GROUP IV—WELL

Whole Milk and Lemon Juice

A. M.	5/28/33	8/12 9 lb. 9½ oz.	11/16/33 16 lb. 8 oz.	7 lb. 15 oz.
V. W.	5/12/33	10/30 15 lb. 12 oz.	1/ 8/34 19 lb. 1 oz.	3 lb. 5 oz.
H. H.	2/14/34	3/30/34 9 lb. 8 oz.	6/18/34 15 lb. 15 oz.	6 lb. 7 oz.

night, thus getting only 6 feedings during the 24 hours.

As to the quantity of food to be given at a feeding, if we add 2 oz. to the age in months, this will give us a sufficient volume up to the age of 6 months. After the baby reaches 6 months, the volume is usually kept the same, with 8 oz. at a feeding being the greatest total amount ever offered the infant. Tyson places emphasis on the need of progressing slowly in feeding the newborn. Overfeeding is likely to cause indigestion.

Orange juice should be started about the 4th to the 6th week.

Vitamin D may be supplied by means of viosterol, and is started when the baby is one to two weeks old. Later cod liver oil may be used, starting with a small amount in order to get the baby used to the taste, and then gradually increase the amount until the infant receives one dram three times a day.

Sufficient mineral is usually supplied by the milk, iron being the only one lacking. Thus, after the baby is five months it should receive a little green vegetables to help meet this need and in order to avoid a nutritional anemia.

Milk is modified to make it more digestible and to secure a more flocculent curd. The addition of water, lime water, lactic acid, lemon juice or other acid accomplishes this end.

Acids and acid fruit juices have been further used to modify milk. This leads to the neutralization of the buffer substance. Thus the milk is more readily digested and finer curds result. Acidification favors the normal functioning of the pyloric sphincter and stimulates the flow of bile, pancreatic juice, and intestinal juice. Also, it supposedly aids the absorption of calcium. Another advantage is that the acid inhibits bacterial growth, thus milk keeps better where there is poor refrigeration. The milk may be fed in a more concentrated form, and is especially suited to undernourished infants having a large digestive capacity.

Lactic acid is recognized as the acid of choice. It is used in the proportion of 4 drops of lactic acid to each ounce of milk. Lactic acid curdles milk and is difficult to prepare. Many mothers give it up and will not use it. Even if prepared successfully, if on warming the milk it is heated too much, more curdling results, necessitating larger holes in the nipple.

Lemon juice is a good substitute for lactic acid. Lemon juice formulas, on the whole, are easier to prepare. In the proportion used it seldom causes curdling, yet it renders the milk more digestible. The curds that are formed are very fine. It is more palatable than lactic acid formulas. It supplies the anti-scorbutic vitamin C, thus the failure to sup-

ply orange juice or tomato juice is to a degree mitigated.

Hess¹⁴ states that if 21 cc. of lemon juice is added to a quart of milk, its buffer action is markedly reduced and the hydrogen ion concentration is increased from pH 6.6 to about pH 5.54.

Reiss¹⁵ reports a series of cases fed lemon juice-evaporated milk formulas. He noted no difference in appetite, but the incidence of gastro-intestinal upsets was less in the lemon juice-evaporated milk group. If the infants tended to vomit on a concentrated evaporated milk-lemon juice feeding this was quickly diluted, thus remedying the formula. He noted no scurvy in either his lemon juice group or his control group. The nutritional state as measured by the weight, tissue turgor, muscle tone, developmental progress, and response to environmental stimuli was excellent in both groups.

In a group of 240 cases half of which were fed lemon juice—evaporated milk and the other half were fed simple formula the food was well taken, there was uniform gain in weight, vomiting was a rare incidence, and the stools were normal.

The following are a few cases presented merely to show the response that the babies will make when fed formulas to which lemon juice has been added.

The first few cases are ones which had a severe diarrhea and as soon as this was under control were placed on whole milk and lemon juice. In each case the response was good, with the babies taking the formula well and gaining weight. The least amount gained in a 3-month period was 5 lbs. 8 oz., the greatest amount gained was 6 lbs. 2 oz.

The two cases presented as Group II were more severe diarrheas. They were fed evaporated milk and lemon juice. Baby E. A. had a very stormy time, but later responded and gained 5 lb. 8 oz. in four months. Case E. M. was not quite so severe; she gained 4 lb. 13 oz. in four months.

Group III shows 4 babies fed lemon juice-evaporated milk formula. Two were watched every week for two months. These two gained 3 lb. 5 oz. and 3 lb. 6 oz. respectively. Cases C. C. and W. B. were watched weekly for

three months. Case C. C. gained 5 lb. 13 oz., and Case W. B. gained 7 lb. 11 oz.

Group IV shows 3 cases fed whole milk and lemon juice. Case A. M. was 5 months old when first seen. She gained 7 lb. 15½ oz. after being placed on a formula. The baby was seen regularly and co-operation on the part of the mother was excellent. Case V. W. was also 5 months when first seen and weighed 15¾ lbs. She gained 3 lb. 5 oz. in 13 weeks. Case H. H. was 6 weeks old when first seen and was seen regularly every week. At the end of a three-month period he had gained 6 lb. 2 oz.

To attempt to draw definite conclusions from such a small group of cases of course would be futile, but they are typical and show what may be expected when feeding lemon juice formula to both well and convalescing babies. Gastro-intestinal upsets were few; failures to gain weight on the formula were few. All the infants showed a decided gain in weight. None showed any sign of lack of vitamin C. All in all, I believe lemon juice is suitable where an acid modification of milk is desired, and that the majority of mothers will co-operate and can make up these formula without any great difficulty.

DISCUSSION

DR. G. B. PEARSON (Newark): I would like to ask Dr. Baker: In feeding lemon juice, is it a substitute for orange juice? Also, is it the citric acid or the vitamin "C" that causes the rapid gain in weight in sick and normal children?

DR. C. E. WAGNER (Wilmington): I wish to compliment Dr. Baker upon his excellent presentation. He certainly has covered the ground well.

My feeling has always been that it is well to employ as simple a feeding as possible in the case of the majority of infants, but in certain selected cases the lemon juice method of feeding is excellent and really proves superior to some of the other types of acidification of milk.

DR. JOHN B. BAKER: In response to Dr. Pearson's question, I have never fed lemon juice formulas with the intent and purpose of substituting the lemon juice directly for the orange juice, although Hess and Reiss

(Continued on Page 312)

EDITORIAL

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W. EDWIN BIRD, M. D. EDITOR

Du Pont Building, Wilmington, Del.

WILLIAM H. SPEER, M. D. Associate Editor
917 Washington St., Wilmington, Del.

M. A. TARUMIANZ, M. D. Associate Editor & Bus. Mgr.
Du Pont Building, Wilmington, Del.
Telephone, Wilmington, 4368

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No. 1

A BILL TO KILL

The legislature of Delaware, as of many other states, is now in session. That bills will be offered here that will seriously affect the medical profession is scarcely to be doubted. Should such proposals not originate in this state they will be presented by the ever-active foundations and associations in other states whose chief purpose seems to be to put over some form of compulsory health insurance. Most of these schemes are sponsored by non-medical persons whose intimate knowledge of the intricacies involved in medical practice is open to serious question. The motives of some of these persons are of the highest altruism, but these are in the minority; the majority of them are professional propagandists generously paid to tell the public—and the profession—exactly what it needs.

Among the foundations promoting compulsory health insurance are the Julius Rosenwald Fund, with a capital of \$13,700,000; the Milbank Fund, with \$10,700,000; the Pollak Foundation, with \$3,000,000; and the Twentieth Century Fund, with \$2,500,000; in other words, \$30,000,000 is working night and day to accomplish their objective. Allied to these foundations—and with a certain overlapping of personnel—are sundry associations, chiefly the American Association for Social Security, the American Association for Labor Legislation, the Medical League for Socialized Medicine, and others. In the offing is the National Advisory Council on Radio in Education, sponsoring a series of nineteen radio broadcasts on medical economics, the majority of whose speakers are rated as favoring compulsory health insurance.

Out of this welter of proponents has come a so-called "Model Bill," bearing the imprint of the American Association for Social Security, and entitled: "An Act to Provide for the Establishment and Administration of a System of Health Insurance." The officers of this Association include Miss Jane Addams, Bishop Francis J. McConnell, Messrs. Alfred I. du Pont, Glenn Frank, John A. Lapp, I. M. Rubinow and Herbert S. Bigelow, with Mr. Abraham Epstein as executive secretary.

Of this bill, Dr. Francis A. Faught, chairman of the Commission on Medical Economics of the Philadelphia County Medical Society, says in the *Weekly Roster and Medical Digest*, December 1, 1934:

This Bill contains all the unsatisfactory features of the European types of health insurance bills, including the dole. The inclusion of this feature together with compulsory health insurance is now recognized as unsafe and unsatisfactory in England. The Bill provides for a complete State political set-up, in which all the appointees, from the health insurance commission down are appointed and subject to dismissal by the Governor. Medical representation is restricted to one physician, who shall be a member of the Health Insurance Commission. The opportunity of a single physician in a commission of five, four of whom are lay persons, to control the situation is impossible.

The only provision relating to the compensation of those supplying medical service under the Bill is a provision under the heading of "local advisory committees" with a lay personnel to fix the manner and make arrangements for

remunerating general medical and dental practitioners, surgeons, etc.

Participation is compulsory for all persons employed for hire "except any person employed at other than manual labor, receiving wages in excess of \$250 per month." This is \$3,000 per year, and will absorb at least 80 per cent of all wage earners in the United States, since it has been shown that before the advent of this depression the average annual income of 78 per cent of the population was \$2,200 or less.

Cash benefits amount to 50 per cent of the employee's full time daily wage after the first five days, and for a period of 180 days in any year. Cash benefits also extend to the dependent wife and children. Maternity benefits are provided for a duration of 12 weeks.

Medical benefits in the same income group extend after a period of six months and are available to not only the employee but his wife, all dependent children, and other dependents living in the same household.

Extent of benefits—medical services of general practitioner at home or in office, hospital and general nursing care, prenatal and maternity care at home or in hospital, surgeons' and specialists' services at office, hospital or elsewhere; the services of laboratories and clinics, and limited dental care, for a duration of 26 weeks.

Additional medical benefits include drugs, medicines, and medical and surgical supplies; nursing service outside hospital, institutional care for convalescents, medical and surgical supplies such as artificial limbs, eyeglasses, trusses, etc., dental restorative work, and the services of dental specialists.

All persons in this income group cease to be beneficiaries after a limited time following the loss of employment.

There is in addition a voluntary insurance provision, which permits all persons whose income amounts to \$5,000 a year or less, from any source, and under 65 years of age, upon passing a health examination, to secure sickness insurance and medical benefits as provided above, upon the payment of $4\frac{1}{2}$ per cent of his annual income.

It is obvious that if such a bill should pass any State Legislature, all medical practice with the exception of about 5 per cent, representing persons with large incomes, would be confiscated by the State, so that any of you who should refuse to accept the call to enroll and supply medical service under this Bill would have about 5 per cent of the population on which to practice medicine.

Obviously, the medical profession must oppose any such bill as this on the floor of the legislature, in the homes of our patients, in public gatherings, in the press, on the radio—wherever and whenever the opportunity is presented. This calls for unity in the profession of the 100 per cent variety—nothing else can combat the \$30,000,000 combine that is behind this bill. The Legislative Committee of the Medical Society of Delaware is capable, experienced, and active, and to them we look as our first line of defense. The moment this bill, or any modification of it, appears at Dover the call to arms will have sounded; a

united and determined profession will be the answer to that call, and the battle cry will be: "Kill This Bill!"

In this issue THE JOURNAL prints the 1935 Directory. That it contains some errors is probable. We shall thank any officer or member of any of the societies listed to send us their corrections.

Due to some changes in the personnel of the Delaware Tumor Clinics we regret we have been obliged to discontinue the series of articles which were inaugurated last year under the title: Cancer Comment.

The State Board Examination for December has come and gone, leaving in its trail four who passed and five who failed. We congratulate the Board on the fairness of its examination—it refutes completely the charge of a Philadelphia newspaper that our policy was Delaware for Delawareans only.

That aspirin-coea cola "cocktail" hubbub died a natural death. Flaring up as something new here, we remember the drug clerks talking about it at least five years ago—their usual comment was: "Baloney!"

And so, to bed—wishing you a Happy New Year, to say nothing of a Healthy New Year, and above all a Prosperous New Year. *boy!*

WOMAN'S AUXILIARY: M. S. of D.

This is the first of the four News Letters which will be sent out to the presidents, presidents-elect, and press and publicity chairmen of the auxiliaries to the State medical societies. In addition, copies will be sent to the past presidents of the National Auxiliary and to the members of the Board of Directors of the National Auxiliary. It would give us great pleasure to be able to put the News Letters into the hands of every member who wished to have a copy, but a limited budget makes this impossible. It has been suggested however, that there may be some members who would like to contribute a dollar to the sum set aside for this department. These contributors would then receive the News Letter four times a year. Another suggestion

is that reveal ing! Mene above all!

for increasing the circulation of the News Letter is that State press and publicity chairmen have copies struck off from the one received from this committee and distribute these among the county groups.

The object of the News Letter is to pass from one group to another news of interest, and suggestions for new activity. This interchange of ideas and information is stimulating because from it evolves a feeling of friendliness between the different sections of the country—a feeling of friendliness which comes from the realization of our common problems. The News Letter cannot, of course, be valuable from the standpoint of literature, but it can be valuable as a distributor of news. You can contribute to its value and usefulness by sending in any bits of news you think might be of interest to others. With every reader a contributor, this News Letter will become a "Round Robin" in a very true sense.

It was decided that the "First Twelve Years" along with the printed reports of the Cleveland meeting be put in the hands of the Supplies Committee for distribution. This committee was authorized to print a new edition of 500 copies of the HANDBOOK. This book, compiled by women of vast experience in our Auxiliary affairs, is of great interest and real value to every Auxiliary member. It answers more fully than anything else we have, the oft-asked question, "What is the Auxiliary and how does it function?"

It was definitely established that the four districts of the Auxiliary, each with its vice-president, are to be comprised of the following States:

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DELAWARE ACADEMY OF MEDICINE

During the past year several volumes have been added to our basic collection of 2000 volumes on surgery and the many phases of medicine and dentistry, until our medical and dental library now numbers approximately 2500 volumes.

By the means of a special fund for books and journals we have added 150 volumes of books and 50 current journals, all carefully selected, lists of which have been published in previous issues of THE JOURNAL. Several members are contributing current issues of journals, and these, with gifts through the Medical Library Association Exchange and from various donors, are adding much useful material to the library.

Every doctor in the State should have access to the leading medical, surgical and special journals of the world, and the most important books. Since one person can subscribe to only a small proportion of such a large number of journals, it is easily seen that the facilities of a library offer a much wider range of reading and investigation. The use that has already been made of our library shows conclusively that there was a real need for it.

Reference questions have been very varied. A telephone call results in material being assembled and made ready for a doctor when he calls at the library. Any further material which we do not have may be borrowed from other libraries through interlibrary loans, and is received promptly within a few days.

As expressed in a recent issue of THE JOURNAL we are mindful of the interest in all material relating to medicine and dentistry and the Library is very glad to receive any material such as books, journals, photographs, old instruments, old case histories, or old office accounts, and we ask your co-operation in preserving them.

Just recently some interesting material has been placed in the library; photographs by

Dr. James M. Winner, and dental instruments by Dr. Charles R. Jeffries, Jr., some dating as far back as 1840.

The library is open each weekday from 10 to 5 (Saturday afternoons if requested), and on Friday evenings from 7.30 to 10.00 p. m.

Out-of-town doctors who come to Wilmington may wish to spend a part of the time at the Delaware Academy of Medicine, either in making use of the library, or while waiting for other engagements. You are cordially welcome.

INFANT NUTRITION

(Continued from Page 308)

and some of the other men who have fed lemon juice formulas say no senrvy has developed in any of the groups that they have fed lemon juice formulas to. I used to supplement my formula, after the baby has gained or has gone on for a period of several months, with orange juice.

My purpose in feeding lemon juice, particularly down here, was because it is an easy feeding, the mothers do not have particular difficulty in making it up. In many places they will not buy the orange juice, but the lemon juice is sort of a novel thing to them, so I put it in the formula, and that supplied the vitamin C that sometimes the children would not get otherwise.

As to the gain in weight, the vitamin C probably had something to do with it, but I believe the acidification of the milk makes it more readily digestible, and that has a great deal to do with it because the children have a tendency to take more of it, and being able to assimilate it more readily the infants' gain in weight comes along more rapidly than when we try feeding them the straight formula.

DR. PEARSON: Does the lemon juice curdle the milk?

DR. BAKER: If you put a sufficient amount in. Put the lemon juice in the water and sugar mixture first, and then add the lemon juice mixture to your milk or add your milk to the lemon juice mixture—we have tried it both ways. If you do not put in more than six teaspoonfulls you will get practically no curdling. It may curdle occasionally, because there is a difference in the individual lemons over which you have no particular

control. The lemons will differ somewhat, but you cannot help it.

REFERENCES

1. Holt and McIntosh: Diseases of Infancy and Childhood, 10 Ed., New York, Appleton-Century Co., 99, 1933.
2. Marriott, W. McK.: Infant Nutrition, St. Louis, C. V. Mosby Co., 17.
3. Potter, P. S.: Metabolism in Infancy, Arch. Ped. (July-Dec.) 1928.
4. Tyson, Ralph M.: Infant Feeding and Nutrition, Del. S. M. J., 6, 75, (April) 1934.
5. Faber, H.: Food Requirements in the Newborn Infant, Am. Jour. Dis. Child., 24, 56, 1922.
6. Holt and McIntosh: loc. cit., 102.
7. Marriott: loc. cit., 37.
8. Marriott: loc. cit., 41.
9. Potter, P. S.: loc. cit., 50.
10. Marriott: loc. cit., 48.
11. Potter, P. S.: loc. cit.
12. Holt and McIntosh: loc. cit., 13.
13. White House Conf. Rep., Sec. 1, Growth and Development, New York, Century Co., 1932.
14. Hess, A. P. and Martzner, N. J.: J. A. M. A., 82, 1604, 1924.
15. Reiss, Oscar: Lemon Juice-Evaporated Milk in Infant Feeding, Arch. Ped., March, 1932.

MISCELLANEOUS

Death Rates by Occupation

What effect has a man's job on the length of his life? An answer to this question is offered by Miss Jessamine S. Whitney, statistician, National Tuberculosis Association, in a report of a five-year study conducted under her supervision, and made public here today by the Association.

The highest death rate from all causes, for working men, 15 to 64 years of age, was found among hostlers and stable hands, 36.22 deaths per thousand employed. The rate for garage laborers of the same ages was only 6.65. The rate for operatives in harness and saddle factories was 30.55; for aviators, 28.73; for operatives in cigar and tobacco factories, 19.32, which was also the rate found for boatmen, canalmen and lockkeepers. Sailors and deckhands had a rate of 17.28. These may be compared with school teachers, with a rate of 4.42, and social and welfare workers, with a rate of 2.75, or with the rate for all "gainfully employed males," aged 15 to 64 of 8.70 per thousand. In the public service, guards, watchmen and doorkeepers died at the rate of 20.25 per 1,000. Firemen showed a rate of only 6.71. General laborers in the public service had a rate of 7.15, but garbagemen were found to have an index of 11.39. The rate for postmasters was higher than that for mail carriers, the figures being respectively 11.00 and 6.10.

Other comparisons taken from the report are: lawyers, judges, and justices, 7.89; physicians and surgeons, 10.69; clergymen, 10.33; cemetery keepers, 6.50; college presidents and

professors, 2.69. Rates for laborers in the chemical and allied industries were low at 5.13, and laborers in soap factories, 3.29, while for inventors, the rate is 17.65 and for draftsmen 3.21. Managers and officials of real estate companies have a rate of 5.64, but for real estate agents it is 10.09. Chauffeurs and truck and tractor drivers, 6.19; draymen, teamsters and carriage drivers, 17.59; telegraph operators, 10.09, and telephone operators, 4.59.

The report, entitled "Death Rates By Occupation," contains eight thoroughly detailed and comprehensive tables, accompanied by interpretative comment. One of these tables shows death rates for various occupations by broad age groups according to cause of death. Suicides among lawyers, judges, and justices are less than the average for all gainfully employed males included in the study; among doctors, suicides are greater. Unskilled workers kill themselves in greater proportion to their numbers than professional men, and agricultural workers less than semi-skilled workers in other pursuits. Tuberculosis takes its greatest toll among unskilled workers, whose rate is double the average for all workers; the rate for skilled workers is a little under the average; while professional men have a rate less than one-third of the average. After the age of 45, heart disease claims more than the average of professional men; but the rate for agricultural workers is only half the average, and unskilled workers again seem to get the worst of it from heart disease, with the highest rate, for both the 25 to 44 and 45 to 64 age groups.

Some of the other diseases for which detailed rates are given in the tables accompanying the report are; cancer and other malignant tumors; nephritis; cerebral hemorrhage; diabetes; cirrhosis of the liver; and accidents.

The importance of the study is pointed out by Miss Whitney who says in the report: "Without accurate data as to the relative health risk of various occupations, no one knows where to expend the greatest effort in industrial health work. Each industry has come to realize that certain of its occupations are more hazardous than others. Employees in dusty trades, those usually exposed to high

temperature or to excessive moisture, or to bad weather conditions generally, are among the workers subjected to the greatest risk. That a certain occupation may be hazardous may be a recognized fact. But how hazardous is it? How much more dangerous is it than other occupations in the same or other industries?"

Many difficulties were surmounted in obtaining the facts contained in the final report, which is based on data of the United States Census Bureau. The principal obstacle encountered was that the death certificates did not disclose occupations in a satisfactory manner for such a study. Another was the frequent discrepancy between the method of classifying occupations on death certificates and census returns, so that a comparison of the number of deaths with the number of persons employed in a given occupation was difficult. Beginning in 1929, an effort was made throughout the United States to obtain uniform reporting of occupations on death certificates, and it was found that ten States, for the year 1930, had their vital statistics in a condition to make studies of them significant. These States were: Alabama, Connecticut, Illinois, Kansas, Massachusetts, Minnesota, New Jersey, New York, Ohio and Wisconsin. The total population for these States comprised 38 per cent of all that for continental United States.

"Another difficulty inherent in studies of occupational mortality," states Miss Whitney, "is the tendency to change occupations on the part of workers whose health becomes impaired or who are growing old. The machinist who becomes a forester after he contracts tuberculosis, and the boiler maker who gets a job as watchman when he grows older, cannot be properly evaluated in any analysis based on census statistics. Only through the intensive study of small groups obtained by the sampling process can this tendency to change occupations be taken into account.

"Not only is one's chance of survival affected by the hazard directly inherent in the job, as in the case of metal filers and zinc miners, etc., but there is too the effect of social or economic status or of different standards of living, as implied by certain occupations. For example, the lowest rate from tuberculosis is

found in the highest economic bracket, and the rates increase steadily through the other social-economic groups (with the exception of agricultural workers) the highest tuberculosis death rate occurring in the lowest social-economic group."

Famous Medical Editor Dies

DR. LEWIS STEPHEN PILCHER

Dr. Lewis Stephen Pilcher, scholar and editor for half a century of the oldest surgical journal in the English language, the *Annals of Surgery*, died on December 24th at eighty-nine years of age. Country school teacher, country practitioner, naval surgeon, student of tropical disease, anatomist, professor of surgery, editor, bibliophile, patriot—these nouns indicate a few of his many interests and activities over a long and intensely useful life.

Lewis Stephen Pilcher entered the University of Michigan at the age of thirteen, and took his bachelor's degree at seventeen, the youngest matriculant and the youngest graduate of that great institution. His master's degree was added within a year; and in that same year he entered upon medical study. This was in 1863 when the Civil War was raging. The next year found him with enough medical knowledge to volunteer as a hospital steward and throw himself into the thick of service to the sick and wounded. Then back to the University of Michigan and the doctor's degree in 1866. Many years later, 1900, this same institution conferred upon him the honorary degree of Doctor of Laws. Practice began in a rural district of Michigan at the age of twenty; at the same time, to guarantee a livelihood, teaching in the little schoolhouse by the blacksmith shop. He rode his horse across the countryside to the call of the sick, followed the current literature of medicine, and for diversion read the classics in their original Greek and Latin.

The next move was to an internship in a Detroit Hospital. Then a postgraduate course in the hospitals of New York City. And then came the successful examination and appointment as Assistant Surgeon in the United States Navy, in 1867. His marriage, retirement from the Navy, and entrance into private practice, in 1872, all spelled romance and

adventure. Then came the years of practice. But Pilcher wanted something more. He organized a dissecting room in his house. This expanded into an adjacent building. A museum and library grew up in connection with it. He dissected also at the Long Island College, and became Adjunct Professor of Anatomy, in 1879, and Surgeon to the Dispensary. In 1885 he was appointed Professor of Surgery at the New York Post-Graduate Medical School.

In 1884 he became editor of the *Annals of Surgery*, which position he has occupied to the present day. This publication, beginning in 1884, was acquired in 1897, by J. P. Lippincott Company. The editorial policy and censorship of advertising have never been relinquished by the editor. If we add to the fifty years of the *Annals of Surgery*, the seven years of the *Annals of Anatomy and Surgery*, and its predecessor which he inspired and dominated, this period of medical editorship establishes him as the dean of medical editors in the United States, if not in the world.

The *Annals of Surgery* will continue with his son, Dr. James Taft Pilcher, as managing editor, with the assistance of an editorial board of eleven of the leading surgeons of the country.

OBITUARY

THOMAS N. MILLIKIN, M. D.

Dr. Thomas N. Millikin, one of the early supporters of the Physicians' and Surgeons' Hospital, died in Wilmington, November 24, 1934, in his 73rd year, of heart disease.

Dr. Millikin was born in Wilmington, July 13, 1862, the son of Thomas and Martha Millikin. His early education was in the local schools, completing the high school course about 1880. He graduated from the Philadelphia School of Pharmacy about 1887. He then entered the University of Pennsylvania, where he graduated in medicine in 1892, beginning his practice in this city in 1895. In this connection Dr. Millikin operated a pharmacy till the latter part of 1933.

In 1911 Dr. Millikin married Miss Emily E. Fegley, by whom he is survived, together with a daughter, Dorothea.

The funeral services were held at his late residence on November 27th, with interment in Old Swedes Cemetery, Wilmington.

BOOK REVIEWS

Fifty Years of Medicine and Surgery: An Autobiographical Sketch. By Franklin H. Martin, M. D., Director-General of the American College of Surgeons. Pp. 449, with 95 illustrations. Cloth. Chicago: Surgical Publishing Company, 1934.

This is the story of a poor boy who "got there," and counts among his friends practically all the leading lights in the surgical firmament. An interesting and inspiring tale, modestly told.

Maternal Mortality in Philadelphia: 1931-33. By the Committee on Maternal Welfare. Pp. 144. Paper. Price, \$1.00. Philadelphia: Philadelphia County Medical Society, 1934.

This is an exhaustive study of obstetrical practice in Philadelphia, under the chairmanship of Dr. Philip F. Williams. So excellently is the material assembled and critically analyzed that it won for Dr. Williams the Strittmatter Award for 1933. It concludes with many sensible recommendations for the betterment of a distressing situation not at all peculiar to Philadelphia.

The Heart Visible: By J. Polevski, M. D., Attending Cardiologist, Beth Israel Hospital, Newark, N. J. Pp. 207, with 122 illustrations. Cloth. Price, \$5.00. Philadelphia: F. A. Davis Company, 1934.

This book is concerned chiefly with the roentgenological aspects of cardiology, the deductions for the most part appearing to us to be correct.

We believe this portion of the book, from a roentgenological point of view, is very helpful. Roentgen measurements are the most accurate method we have at the present time of outlining the heart and determining its true diameter.

However, some of the roentgenograms given

as normal variations seem to us a little too presumptuous. For instance, Figure 4, given as a simple ptotic heart, we believe will stand further investigation. Further, we feel the roentgenologist is working slightly out of bounds when he attempts to make a diagnosis of myocardial degeneration, as in Figure 48. There are several other statements to which we believe exception should be taken, but space is not available for a critical discussion of them.

High Frequency Currents in Performing Biopsies

Jacques P. Guequierre and Fred D. Weidman, Philadelphia (*Journal A. M. A.*, Dec. 1, 1934), point out that the objections of the pathologist to the use of coagulating currents can be overcome largely by adhering to the cutting current. The method is not infallible, owing to such factors as muscular twitch, an unsteady hand or an anatomic location such as the face, which limits the removal to a very small specimen. Barring these conditions the readiness of the apparatus, the bloodlessness, the insensitiveness to post-operative pain and the psychologic effect on the patient all contribute to the securing of a greater number of biopsies, which are so sorely needed for the advance of dermatology in general, to say nothing of the assistance that accrues in confirming the diagnosis.

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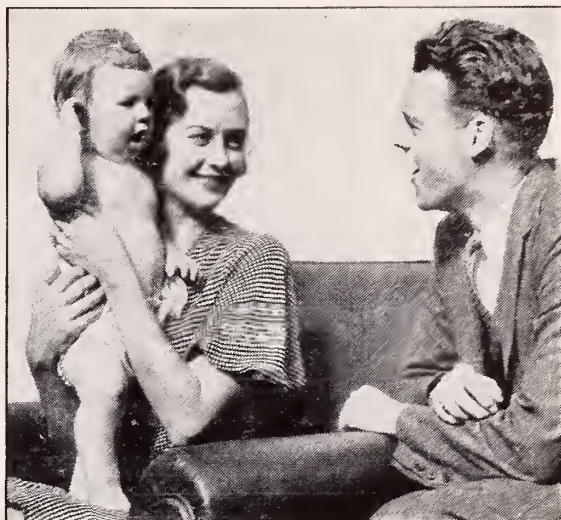
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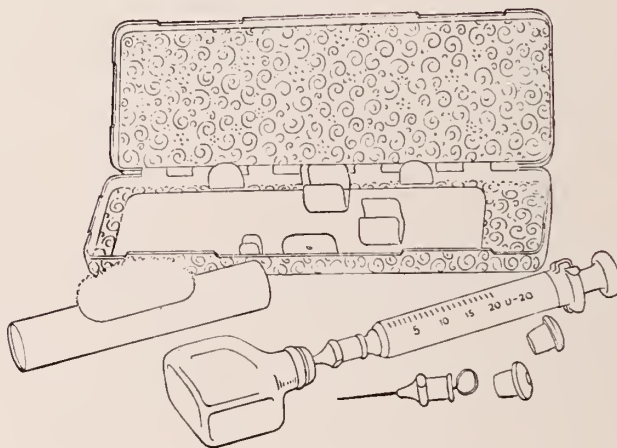
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INSANITY: SOME MEDICO-LEGAL ASPECTS*

HON. DANIEL J. LAYTON, **
Georgetown, Del.

Gentlemen of the Medical Profession:

Some time ago, in a moment of weakness, at the request of Dr. Speer I consented to say something with respect to some of the problems that concern your profession and mine. Upon approaching the subject in order to express thoughts definitely, I began to realize that discretion would have been the better part of valor, and that I should have declined as gracefully as possible.

Necessarily, it is impossible to attempt to consider the great multitude of problems which constantly arise in medical jurisprudence. Even if I were qualified to discuss many of them, the limit of time would forbid. All I can do is to select some subject the problems of which confront from time to time the practicing physician, lawyer and judge, and these frequently concern mental unsoundness in both criminal and civil cases. Often such questions primarily are for the trained alienist, but the attending physician is frequently called upon for assistance, and his opinion, based upon personal observation, is of the greatest practical value.

For many years the conflict between the lawyer and the physician has been going on with respect to the medico-legal aspect of mental soundness. The courts insist that there is some test or formula which can be applied in all cases to determine the question of insanity, in other words, that it is more or less a question of law, while the physicians insist that mental soundness is a question of fact to be determined in each case from the evidence.

and to be studied in the spirit with which a difficult diagnosis should always be approached. Hence, they say there is no uniform rule by which to test these patients.

It will be seen that the great difficulty lies in that frequently the courts do not recognize the medical idea of a disease with all of its attending and far-reaching consequences, and physicians do not subscribe to the legal idea of mental incapacity.

Until the end of the eighteenth century insanity received but little attention from physicians and psychologists. Lunatics were regarded as outcasts. Unless birth or wealth afforded opportunity for their custody at home, they were herded in pens or chained in cells and generally subjected to the most inhuman treatment. In New England, for instance, they were frequently let out to the lowest bidder for their maintenance. Asylums were unknown. Necessarily, there was a tendency to narrow the definition of insanity so as to reduce as far as possible the numbers of this unfortunate class. But when the English people found that their King, George III, was insane, but with lucid intervals and with periods of apparently complete recovery, a serious attempt at the study of the cure of the disease was commenced, and thereafter the definition of insanity, in the scientific and philanthropic mind at least, was enlarged to include those who while not clearly lunatics were yet subject to mental or moral anomalies which a wise medical treatment could alleviate or entirely remove.

The law was slow to recognize the march of progress toward a logical and humane view of insanity as a disease, and as late as 1862 a Lord Chancellor of England said:

"The introduction of medical opinions and medical theories into this subject has proceeded upon the vicious principle as considering insanity as a disease."

* Read before the Medical Society of Delaware, Dover, October 9, 1934

** Chief Justice of the State of Delaware.

It may be agreed readily that the experience of medical men in England in matter involving mental unsoundness must have been exceedingly unpleasant.

As has been said, courts have always considered that there must be some measuring rod by the application of which to the facts of a particular case a jury might determine the question of insanity. One early test was that of Lord Hale, a most enlightened judge for his time, but who nevertheless firmly believed in witchcraft and sentenced at least two persons to death for the supposed crime. His test became known as the fourteen years old test. He said that if a person, although suffering under melancholy distempers had as great an understanding as ordinarily a child of fourteen years has, such person could be guilty of a felony. He selected the age because the law fixed the age of fourteen years as the age at which capacity for crime was presumed conclusively to exist. Just how a jury would be able to apply such test with any intelligence or satisfactory result is not made clear. Later, in 1724, Justice Tracy laid down the truly barbarous test which became known as the wild beast test. He ruled, in all seriousness, that a person accused of crime, defending on the ground of insanity, was not excused, unless he was totally deprived of his reasoning, and did not know what he was doing any more than a wild beast. Later, there was evolved the test known as the knowledge test, that is the knowledge of right and wrong. In 1760, the Earl Ferrers was tried for murder. The defendant was a peer of England and, of course, was tried before the House of Lords. The criminal practice of that day did not permit an accused person to be represented by counsel and the extraordinary spectacle resulted, reflecting no credit upon the law or upon those whose duty it was to administer it, of a man in jeopardy of his life trying to prove himself insane by the acuteness of his examination and cross examination of witnesses. The prisoner, in order to prove himself insane, was compelled to reveal the fact that he had sufficient reason to conduct his own defense, and, of course, this very fact was seized upon by the prosecution to prove his knowledge of right and wrong

and that perforce he was sane. He was convicted and hanged in spite of the fact that insanity prevailed in his family and that he was suffering from chronic alcoholism at the time he committed the act.

In 1843, the famous M'Naghten case was tried in England. M'Naghten killed the private secretary of Sir Robert Peel, probably mistaking the secretary for the statesman. There was no doubt that he suffered from morbid delusions, and he was acquitted on the ground of insanity. Such was the public outcry and criticism of the verdict that the House of Lords, without any authority, addressed a request to the judges of an authoritative statement of the law on the subject of insanity as a defense in a criminal case. What the House of Lords wanted to know was what the law was, generally speaking, with respect to insanity as a defense and particularly as to delusional lunatics who committed crimes. The effect of the judges' answer, although they did not in all respects agree, was that a jury should be instructed in every case that every man is presumed to be sane, and, to establish insanity as a defense, it must be clearly proven that the accused was laboring under such a defect of reasoning from disease of the mind as not to know the nature and quality of the act he was doing, or if he did know it, that he did not know he was doing what was wrong. And further, they said that a delusional lunatic, "must be considered in the same situation as to responsibility as if the facts with respect to which the delusion exists were real." That is, if a lunatic kills another in supposed self defense, acting, of course, under a delusion, the defense is good, for self defense is recognized as a good defense in law; but, if the delusion that the deceased had merely injured him in his reputation, property or otherwise, he would be liable to punishment, for such injuries are not allowed in law as an excuse for killing. This brought forth the caustic comment that a lunatic is not to be held liable for his acts so long as he acts with reason and propriety.

The M'Naghten case has been followed, it is said, quite rigidly in England, and to a great extent in this country. It affirmed in obscure language the test of knowledge of

right from wrong, to which test the alienist will not subscribe.

In this country many judges refuse to follow this ruling because it demands too much proof. Other courts qualify the rule in various ways, and the prevailing rule seems to be that capacity to distinguish right from wrong with respect to the act charged as a crime at the time of its commission is the test of responsibility, and not the capacity or ability to distinguish right from wrong in the abstract; that is to say, a person may be sane upon every subject but one, and yet, if that one subject is the occasion for the very act with which he is charged, and if, with respect to that act, he is unable to distinguish right from wrong, his defense is complete.

Some courts say that it is capacity to distinguish the moral character and quality of the act that determines criminal responsibility. Other courts say that if a person has knowledge and consciousness that the act he is doing is wrong and will deserve punishment, no matter what may be his mental weakness, he is sane in law and is subject to punishment.

A review of judicial opinion in this country proves very strikingly that there is no unanimity among judges, although most of them are still striving after some formula or test which may be applied in every case, and by which the jury is to be governed. Mr. Bishop, the celebrated writer on criminal law, says that no test has been found for the reason that no test exists.

Delaware physicians and alienists properly may inquire to what rule or test do the Delaware courts subscribe?

This question is somewhat difficult to answer. Some of the text writers refer to Delaware as in that class of jurisdictions which hold to the knowledge of right and wrong with respect to the act charged as the test of capacity where insanity is relied upon as a defense; and, in fact, they would seem to be justified in their statements by the judicial opinions announced in some of the cases tried before our courts. However, an examination of a series of charges to juries leads to the conclusion that there has been a great confusion of thought, and that the judicial

mind has ranged between the strict rule of the M'Naghten case to the conception of irresistible impulse as a form of insanity which affords a defense. The first rule is the lawyers' rule, the second the alienist's view.

Of course, this confusion or uncertainty is of more interest to the lawyer than to the physician, but it is important that the physician who may be offered as a witness should know what rule or test is recognized by the court before which he will testify, if there be any rule; and again, it is important in that it tends to confirm the physician's argument that there is no test by which a jury can measure the soundness of a man's mind, but that insanity is a disease, just as any other disease, and a question of fact, and not a legal formula; from which, it is maintained that as the judicial mind is confused on the subject, there is no good reason why the opinions of the trained alienist ought not to be more readily accepted.

Proceeding to a short review of the cases in Delaware, we find: in 1851, eight years after the M'Naghten case, John Windsor was tried in Sussex County for the murder of his wife. Windsor was an aged man of position and property. He was shrewd and successful in business, of general good character and peaceful conduct. He was of melancholy habit, firmly believing in witchcraft, and was a subject of superstitious fears. Generally, he was affectionate and kind to his wife except when under the influence of a delusion which induced a belief of her infidelity. During these paroxysms of jealousy, suspicion and fear, he showed great violence of temper, and in one of them he deliberately shot his wife.

His defense was insanity. It was clearly proved both by lay and professional witnesses that Windsor, in fact, was subject to the delusion that his wife carried on a criminal correspondence with one Osborne. It was further clearly proved that there was no basis of fact for this belief. The state proved his general business acuteness, his ability to manage his affairs, that he could compute interest well, his knowledge of history and Scripture, from which it was argued that the prisoner was sane. One of the medical witnesses was an English physician who had had an exten-

sive experience of insane patients. This physician had frequent opportunities to converse with the prisoner and testified that he was suffering under a monomaniac delusion. The court discusses a number of cases, both English and American, including the M'Naghten case, and said that the aim of the cases seems to be

"to define a state of mind in which the prisoner is capable of the perception or consciousness of right and wrong, as applied to the act he is about to commit, *and* has the ability, through that consciousness to choose by an effort of the will, whether he will do the deed which he knows to be wrong."

It will be noticed that this is the test of a responsible mind. So that, we have two constituents of responsibility, capacity of intellectual discrimination and freedom of the will, from which it would seem to follow that irresponsibility is established if either constituent is lacking. This clearly is not the rule of the M'Naghten case, although there is some room for confusion occasioned by the employment of the conjunctive "and" instead of the disjunctive "or."

It will be noticed also that although the Windsor case embraced the question of partial insanity, or delusion, the court definitely omitted all reference to the test of delusional insanity as laid down in the M'Naghten case, that is, that a delusional lunatic must be considered in the same situation as to responsibility as if the facts with respect to which the delusion exists were real. If our court had followed the English case in this regard, it would have, in effect, amounted to an instruction to the jury to find a verdict of guilty, for if the facts in the Windsor case were real, that is, if his wife had been guilty of adultery, Windsor did not kill her in the act of adultery. Now the law is and has been that if a man kill his wife in the very act of adultery his offense is not entirely excused, but is reduced in grade from murder to manslaughter, the effect of the sight being held so to excite the passions as to remove the element of malice, but if the killing be done afterward, through anger or jealousy, it is murder. The court omitted all reference to this phase of the English ruling, and the inference is that it definitely refused to follow such an unjust rule.

The Windsor case is interesting to the medical men too, in that the court evidenced, by its charge, the centuries old antagonism of the courts to medical theories in insanity cases. The court quotes with approval the language of an English Chief Justice, as follows:

"It may be that medical men may be more in the habit of observing cases of this kind than other persons; and there may be cases in which medical testimony may be essential, but I cannot agree with the notion that moral insanity can be better judged of by medical men than by others."

Windsor was convicted, and sentence of death was pronounced, but the report goes on to say, such was the great doubt of his sanity existing in the public mind and especially with the medical profession, he was respited from time to time by the Governor, and as a matter of fact, the sentence never was carried into execution.

Now, the inability to choose by an effort of the will whether or not to do an act points directly to irresistible impulse; but a doubt arises whether in fact the court intended to state the rule of responsibility so as to require that the accused, to be relieved from the consequences of his act, has been deprived both of the ability to distinguish between the right and wrong of his act and the power to choose whether or not to do it, or whether it was intended to make the existence of either one of these states of mind sufficient to excuse the act (27 L. R. A. N. S. 462).

But whatever the court did mean, the test of insanity as there established was not followed consistently.

In two cases, one in 1864, the other in 1867, Chief Justice Gilpin charged flatly that the test of insanity depended upon the capacity of the accused to distinguish between the right and wrong of his act, and that if he knew that the act was wrong, he was responsible. In these cases there is nothing to suggest that the Windsor case was overruled. However, upon the authority of these cases, Delaware is classed by some text writers as a follower of the M'Naghten rule.

In 1873 was tried the notorious case of Dr. West for the murder of Henry Turner, a negro. The theory of the state was that West, having insured his life for a large sum of money, planned to defraud the insurance

company by causing it to be believed that he was dead. Accordingly, he killed the negro, who was about his own size and weight, in his office in Dover. He cut off the feet, hands and head and skinned the body, and then set fire to the building hoping that the charred remains would be accepted as his. Then it was his purpose to have his wife collect the insurance. After killing Turner he cut off strips of skin, poured alcohol on them and set them afire to determine whether the color of the skin would be changed. Not satisfying himself, he then skinned the body, cut off the head, and buried them and then set fire to the building. But the fire was discovered and extinguished. Dogs dug up the portions of the body that were buried, and the body itself was not consumed. In his confession he asserted self defense, but at the trial the defense of insanity was interposed, and Chief Justice Gilpin then reverted to the test of insanity as established in the Windsor case, that is, the knowledge of right and wrong, *and* the ability by an effort of the will to choose whether or not to do the act.

Here again, the Chief Justice said nothing to indicate that he was pronouncing a rule different from that previously established by him, although it is difficult, not to say impossible, to regard the language used as identical in meaning.

In 1888, occurred the Reidell case. There, Chief Justice Comegys referred to the Windsor case, and said:

"The question is not, simply, whether one who kills another, was capable, at the time of distinguishing or knowing the differences between right and wrong with reference to his fatal act, but also, whether he was then capable of controlling himself from the commission of it."

And further, to make his meaning more clear, he went on to say:

"It is a well-known truth that such capacity or knowledge may be perfect enough in an individual and yet, he may be unable from destruction, or impairment by disease, of that function of the brain which is concerned with the will, to avoid doing what he knows to be wrong."

and then gave instances, such as cases of dypsomania and kleptomania.

This elucidation of the test of insanity as laid down in the Windsor case points directly to the conception of irresistible impulse arising from a diseased mind as an excuse for crime, and, I suppose more in conformity

with the alienist's conception of insanity.

State vs. Cole was tried in 1899. Chief Justice Lore used this language:

"The proof must establish the fact that the prisoner was incapable of distinguishing between right and wrong in respect to the fatal act *and* was without the power to choose whether or not he would do the act."

This statement creates the doubt which I have already referred to, and is not in conformity with the Windsor rule as explained by Chief Justice Comegys. But in 1903, in the case of the State v. Jack, Chief Justice Lore said:

"To exempt a person from responsibility for crime, the insanity must be of such a character as *either* to deprive him of the capacity to distinguish between right and wrong in respect to the particular act, *or*, to deprive him of sufficient will power to choose whether he would do the act or refrain from it."

This statement is in exact conformity with that of Chief Justice Comegys in the Reidell case, and is, perhaps, the latest judicial word on the subject in this state. Accordingly, a recognized authority placed Delaware among those jurisdictions which admit irresistible impulse as a defense. (16 C. J. 102).

So far as I know, the Supreme Court has never had occasion to pass upon this question. All of our judicial pronouncements are those of trial courts, and therefore, with respect to the question arising hereafter, the court may follow any of the judicial ideas expressed in the above cases, ranging from the rigid right and wrong rule condemned by the expert to the liberal power of will rule which is more to his liking.

All of this serves to point out the confusion either of thought or expression of idea, and the impossibility of establishing a judicial yard-stick for insanity to be applied by a jury in a given case, and would lead us rather to the expert's view that there is, and can be, no legal test, but always it is a question of fact to be determined by the jury from all the evidence, and not in conformity with a legalistic formula.

The judges of the New Hampshire courts took the initiative in presenting a rational and scientific discussion of criminal lunacy. The underlying principle of these jurists is that the question of insanity is a question of fact to be decided by the jury, not a question of law to be defined by the court: that insan-

ity is a disease, a pathological process, and as such it is a fact for the jury, and all signs, symptoms and tests of it are matters of evidence, and are not to be laid down as definitions of law.

Judge Doe, of New Hampshire, pointed out very clearly that the medical errors of former days gained the sanction of the law merely by being used in the law books of high authority, and he implies that the ancient English judges, among them Coke and Hale, simply repeated the crude medical opinions of their times, opinions which have long been abandoned or modified by the medical profession. Judge Doe says that tests and symptoms of insanity are no more matters of law than are the tests and symptoms of consumption, cholera, or of poisoning, and that no more than he could have tolerated the tests for arsenic, if they had been laid down centuries ago by Coke or Hale, could he take from those writers the tests for insanity.

He says that the legal profession, in profound ignorance of mental disease, have assailed the experts, who know all that is known on the subject of insanity, as theorists and sentimentalists who are attempting to override the settled principles of the law; whereas, in fact, the legal profession is invading the province of medicine and attempting to install old, exploded medical theories in place of facts established in the progress of scientific knowledge, and he said very plainly that the courts would escape from a false position when they withdrew into their own territory, in other words, that it was not the business of courts to decide scientific questions: such evidence they must take from experts in science. He exposed case after case in which courts ignored the scientific evidence, and charged the jury that the legal test was the knowledge of right and wrong. He said that it was the common practice for experts, under oath, to inform the jury that such knowledge is not a true test of insanity, and then for the judge, not under oath, to tell them that it is. He said:

"When disease is the propelling uncontrollable power, the man is as innocent as the weapon. . . . if his mental, moral and bodily strength is subjugated and pressed to an involuntary service, it is immaterial whether it is done by his disease, or by another man, or a brute or any physical force

of art or nature set in operation without any fault on his part. If a man knowing the difference between right and wrong but deprived, by either of those agencies of the power to choose between them, is punished, he is punished for his inability to make the choice—for his incapacity, that is the very thing for which the law says he shall not be punished."

And he concludes:

"Whether it is a possible condition in nature for a man knowing the wrongfulness of an act to be rendered, by mental disease, incapable of choosing not to do it and of not doing it, and whether a defendant in a particular instance, has been thus incapacitated, are obviously questions of fact. But, whether they are questions of fact or of law, when an expert testifies that there may be such a condition, and that, upon personal examination, he thinks the defendant is or was in such condition; that his disease has overcome or suspended, or temporarily or permanently obliterated his capacity of choosing between a known wrong and a known right, and the judge says that knowledge is the test of capacity, the judge flatly contradicts the expert. Either the expert testifies to the law, or the judge testifies to fact. From this dilemma the authorities afford no escape."

And in another New Hampshire case, Justice Ladd said:

"It need not be said that this is not the business of a court of law. It is a work that can only be reasonably well done by men who devote their lives exclusively to its accomplishment."

And further, he said:

"I may add, that it confirms me in the belief that we are right, or at least have taken a step in the right direction, to know that the view embodied in this charge meets the approval of men who, from great experience in the treatment of the insane, as well as careful and long study of the phenomena of mental disease, are infinitely better qualified to judge in the matter than any court or lawyer can be."

An Illinois judge held the following to be a safe and reasonable test: that at the time of doing the act charged the prisoner was not of sound mind, but affected with insanity; and such affection was the efficient cause of the act, and that he would not have done the act but for that affection. This, I believe, would be accepted by the expert as being correct from a scientific viewpoint.

Again, the physician is called upon frequently to testify in civil cases involving mental unsoundness, and perhaps, most often in the contest of wills.

This sort of inquiry is more difficult in will contests than in criminal cases because the person about whom the inquiry is to be made is dead. Everything, oftentimes, depends upon the testimony of persons who may not have been good observers, may have little oppor-

tunity to observe, may be interested, prejudiced, or grossly ignorant.

The medical man, in these cases, again is met with tests, formulas and presumptions, all of which he must bear in mind and more or less conform to, if his evidence is to be regarded of value by the courts and by lawyers.

First, he meets the presumption of law that every man is sane, until proved to be otherwise, with the exception, that if insanity has been established, then that condition is presumed to continue until sanity is proved, and the burden is placed on him who seeks to establish the will to prove that it was executed during a lucid interval. Again, if the will is regarded as a reasonable one, this fact goes far to establish testamentary capacity.

The medical man also should know something of the classes of witnesses in will contests. First are the subscribing witnesses. The theory of the law is that they are to be something more than mere observers of the physical act of signing. They are to be the judges also of the testator's mental capacity, and are placed around him for that special purpose. They should be, but often are not, persons of intelligence. In practice, the law does not demand observation or even intelligence. Almost any person of full age will answer, and, although ignorant, non-observant, or interested, they are permitted to express their opinions as to mental soundness without being obliged to furnish the grounds for their opinions. Second, are non-expert witnesses, often friends or relatives, prejudiced or interested, ignorant oftentimes. These witnesses are permitted to give their opinions but must testify with respect to the facts upon which their opinions are based. Third, expert witnesses, who may testify not only upon facts ascertained by personal view and observation, but upon the evidential facts detailed in court and heard by them, or upon the assumed facts contained in a hypothetical question.

First, what is testamentary capacity? The law says it is a sound and disposing mind. This is, of course, no definition for it says what we know, that a sane person has testamentary capacity. It is defining in a circle, and the whole question is left just where it is found. But, going from the general to the

particular, the courts say that a mind is sound in law sufficient to be regarded as having testamentary capacity if the possessor of that mind, the testator, has mind and memory enough (1) to know what he is about to do, that is, the making of a will; (2) to recollect the kind and character of his property; and (3) the persons to whom he is about to give it, or as the law phrases it, the objects of his bounty. If these demands are met, the law says his mind is sound, or sound enough to make a will.

Manifestly, generally speaking, a definition of testamentary capacity is impossible for the reason that the thing itself is not universally conceived of in the legal mind. It means one thing with one court, another thing with another court. With some it is destroyed by loss of memory, with others not. With some it is the ability to transact a little business, with others not even this. With some it is compatible with the loss of practically the greater part of the mental faculties, with others it is abolished by a simple delusion.

The medical man testifying before the Delaware courts in will contests, in addition to keeping in mind the presumptions above stated and the classes of witnesses in such causes, must also know that our courts, in common with others, do not demand much of a testator so far as intellectual power goes. Intellectual feebleness alone, or mere weakness or understanding, whether this condition of the mind be natural or the result of an injury or disease, does not disqualify a person from making a valid will. A partial failure of mind or memory even to a considerable extent, is not, in itself, sufficient ground for setting aside a will, if there still remains just enough to satisfy the requirement of the law, that is, sufficient mind and memory to understand what the business is, the property to be disposed of, and the persons who are to receive it.

He must bear in mind that partial insanity, or delusion, does not abolish testamentary capacity and the will will be upheld, in so far as the law can do it, unless the delusion has directly influenced the will or some provision of it, and he should know that our courts have undertaken not only to define delusion, but

also lucid intervals. A delusion has been defined as being a fixed belief in the existence of certain things, purely imaginary, as real facts, when in truth they have no real existence whatever. And, a lucid interval has been defined thus:

"If the mind is apparently rational on all subjects and no symptom of delusion can be called forth on any subject, disorder is for that time absent. There is then a lucid interval in the course for which a lunatic may make a valid will."

It may seem strange to the medical man that courts should have undertaken to lay down rules with respect to which the scientific mind would hesitate or decline, but such has been and is the desire of lawyers to reduce all matters to rule or formula that the situation, for the present at least, must be accepted by the expert, and kept in mind always if he is to be of service.

It would seem fairly clear that the rigid rule of law with respect to partial insanity or delusion in both civil and criminal cases—that the delusion must be the causation of the act—has no true basis. It proceeds upon the supposition that a person's mind may be ninety-nine parts sound, and one part diseased, and that the insane, or delusional act, must be shown to issue from this little section of infection. The idea is that a man may be insane in a limited territory of his mind but responsible for what happens in the open territory, as Hamlet said of himself:

"I am but mad North—Northwest; when the wind is southerly I know a hawk from a hand-saw."

The rule ignores the wide range of mental symptoms, and insanity is limited to one specific act; and the fact is also ignored that it is often impossible to trace the whole influence of delusion on conduct. It is quite easy to say, as many courts including our own have said, the question is not whether he was insane on any subject, but whether he was insane with respect to the particular act done by him. But if the mind is diseased it would seem that no rigid rule can be laid down creating responsibility or want of responsibility; but, until the lawyer is more ready to accept, without reservation, the view of insanity as a disease, and therefore, a subject for trained opinion, the status of the law will remain as it is, and the medical man will be

of little service if he ignores the legal aspect of the question.

The difficulty which confronts the man of medicine when testifying in cases of mental unsoundness lies in two particulars: the effort of the law to reduce to a rule or formula that which is not capable of being so reduced; and the indisposition of the dispensers of the law to accord to the physician the same consideration which is accorded to him when the case of a bodily disease arises. This is exemplified by a former Chief Justice of this state who, at the time, undoubtedly expressed accurately the opinion of the bench and bar. He said:

"Medical witnesses, however well educated and however well acquainted with the anatomy of the body and with most physical conditions, are nevertheless, unable to throw much light on the nature of the mind or the mode of its operations."

I hope that we have made some little progress since that time, and are somewhat more tolerant of medical opinion.

If an alienist were asked in his ordinary practice to diagnose a case to which he could give no personal examination, upon the statements of more or less ignorant or interested persons, he would, perhaps, decline to commit himself; yet, this is often the test set for a court of law, a task to be undertaken by a judge and jury who have little or no scientific knowledge.

If a physician or other expert, is called upon to testify with respect to a disease of the body, the effect of poison on the human system, the presence of human blood upon an object, or whether a person has drowned or not, his opinions and conclusions are accepted by the courts with respectful consideration. The advance of scientific knowledge in these respects is cheerfully acknowledged. There is no rule or maxim of law to fetter the mind of the judge and lawyer. An attentive ear is given to training and experience. But, when a question arises which has to do with a disease of the mind, the whole judicial attitude toward the expert changes. His opinion is not freely accepted. The judicial atmosphere is clouded with skepticism. The attitude is, somewhat disguised; we know as much about the mind as you do. We can draw inferences from conversation and conduct as well as you

can. Judge-made rules and tests are preferred to scientific knowledge and trained experience, not, as formerly, because the courts do not regard unsoundness as a disease, but because, bound by legal precedent, there is a lack of belief in accuracy of medical opinion in mental cases.

However, we have advanced a long way from the time when courts held that only those were insane who had no more mind than a wild beast, a long way from that time when an English Chancellor characterized the principle to be a vicious one that regarded insanity as a disease, and we have, I hope, advanced some little distance from the time when our own court said that even a well educated and trained medical man was unable to throw much light on the nature of the mind or the mode of its operations.

It is quite apparent that judges, although seemingly they may adhere, through force of precedent, to legalistic rules and formulas, have a habit of stretching those formulas, or in some manner to make them fit the facts of a particular case, recognizing that insanity is a question of fact, and that the best way to attempt to solve problems of mental unsoundness is to call upon those who are most likely to understand and expound them.

We have not yet reached the point where the opinion of the physician upon a question of insanity is accepted as a fact, just as his opinion is accepted in a case of bodily disease. The millenium has not come, but, at the long last, the lion and the lamb will lie down together.

THE "SCIENCE" OF MEDICAL SUPERSTITION

C. A. D'ALONZO, B. S.,
Wilmington

It is no wonder that out of a world brimming over with mysticism in every aspect of its life a host of superstitions has evolved. The phenomena of life are mystifying. Many discoveries are all but inconceivable. Man himself is a mystery. His very evolution is perplexing. His very destiny and post-existence is incomprehensible. He is a lone cloud blown about by uncontrolled and uncertain winds. It is not strange, therefore, that this circum-

fusion of ideas tends to create from his mysticism a mystic mind.

Hence it is not even noteworthy or surprising that especially in the medical field (a field deluged and flooded with seemingly diverse theories, apparently divaricate and contrasting principles, misleading and misapprehensible facts, challengeable notions, treatments whose numerosity and multiplicity naturally occasion profusion) there would be a fertile place to cultivate the mystic minds. Naturally enough, out of this medical whirlwind countless numbers of superstitions have emanated. Cults as well have taken advantage of this fertile field. Some have had a rapid climax and rapid fall, others have persisted longer. Proof enough of the latter is found in the apparent success of osteopathy, chiropractic, naturopathy, Christian science, new thought healers, occultism in general, and scores of others. Added to man's mystic mind, other factors have contributed toward the success of these cults. Among these are the "*vis medicatrix naturae*," and the apparent failure of the regular practitioners. As one writer put it, "when the doctor fails, the quack hails!"

Out of this chaos of misconstruing principles, the outstanding method of dealing with the unexplainable arose—the substitution of superstition. Superstition is the greatest manifestation of doubt, and but an outlet of expression of mysticism.

The primitiveness of the effects of mysticism is clearly reflected by Dr. Robinson in his "*Story of Medicine*." "Abnormal man could not grasp the conception of natural death. Disturbance or stoppage of physical life was due to supernatural causes—to the wrath of the dead, the uncanny powers of human enemies, the revenge of offended spirits. Terrifying as were the crocodile and hyena, he could see them and understand them and cope with them, but against witchcraft he had no weapon. Disease demons were more numerous than the forest, and they pursued him every minute of the day and night. He could escape the long serpent that awaited him, but not the ghosts and their magic. . . . It was too much for him, he could not fight the ghosts alone, he must have protection. . . . Out of primitive man's need thus

arose the first professional class—antedating even prostitution and religion—the profession of the magician or mystery man, the medicine-man." Man had to have a supposedly superior power, a supernatural being, to explain phenomena incomprehensible to his mind. That man never has totally evolved beyond the influence of the medicine-man, and that his mind is still somewhat stagnant in that respect, is manifested in the success of quacks in our modern day, and the "miracles" attributed to their power.

Along with the primitive medicine-man in dealing with supposedly supernatural beings, there arose in contradistinction the primitive priest. The savages ascribed to certain spirits the cause of disease and evils. It was the medicine-man who dealt with these malevolent and malnurtured spirits. The function of the primitive priest was different. Diseases which were not caused by the angry gods were believed to be caused by demons dwelling internally. Two popular methods were used to drive out these demons. The first method was to make the body an obnoxious, dolorific, and intolerable residence. Secondly, to eliminate the indwelling spirits by unrivalled and superior spirits. In so far as he used remedies which had a physical or chemical reaction upon the body the primitive medicine-man foreshadowed the modern physician. The primitive medicine-man remained distinctive of undeveloped societies, whereas it was the fate of the priest proper to gain in his position and ascend along with social aggregation.

Concomitant and synchronous with the birth of superstition was the birth of magic. Various countries became differently influenced in the growth and extension of this magic. Greece seemed to have the highest degree of immunity. Dr. Wright expresses the belief, "As to medicine, the remark has been made by others doubtless, but it impressed me much at first, that in the words of Hippocrates we find about as little of primitive magic as we do in the most recent profession of modern medicine." The early culture of medicine had its gushing and emanation through Thales and Anaximander, and by Heraclitus and Democritus. It was from this very culture that Hippocrates secured his inspiration. The

medicine of Hippocrates is strikingly sparse of the influence of magic.

However, the smites of superstition have hit every country. No country is totally immune. In his "Diary" Pepys speaks about carrying a hare's foot about oneself. For some superstitious reason it used to be thought in England that man had one rib less than a woman. By the study of the human skeleton, of course, this was disproven early. If a blister did not rise, the early Englishman would take it as an indication of approaching death. It was held that disease changed at intervals, and that by certain medicines the exact location of the disease could be discovered. In his book entitled "Fascination," written in the year 1653, Guttierrez, a Spanish physician, stated that children of that country wore amulets as a protection against the "evil eye." This same superstition predominates even to the present day among Italians. The different forms of the same superstition in Latin countries are striking. Especially among Italians from Sicily and Naples the belief in "the witch with the evil eye" is very much alive. If "jettatore" (witch with the evil eye) is yelled amongst such believers, they will promptly disperse, and one may watch them performing various motions in an attempt to ward off the evil witch. The Italian mothers dread the "jettatore di bambini," which is another form of the above mentioned superstition. This particular superstition is more commonly known as "malocchio," (evil eye).

The French have great faith in the ability of all sorts of flower water to cure or relieve asthma. The Chinese have great faith in the use of iron nails to seal a coffin, and thus keep out the evil spirits and evil influences. It is also common for the Chinese to make their children wear paper masks on the last night of the year to prevent the god of small-pox from "pouring it out" on them, as he is supposed to attack only pretty children; but he will pass them by when they are thus disguised. For the treatment of urinary lithiasis the Arabian physicians recommended urine to be taken internally. Morier mentions a prevalent and general superstition which he found in Persia. To relieve disease a person has only

to deposit a rag on a certain bush, and from the same spot take another which has been left by some previous sufferer. Dr. Miller states that even in his present practice there remains among a particular class of Russians a disgusting belief that with the advent of labor, a speedy and easy delivery may be brought about by intercourse with the husband. The modern Jew adheres to many of the older superstitions. It is not uncommon for a gentile physician upon entering the room of a pregnant Hebrew woman to see placards written in ancient Biblical language on the walls. The purpose of these papers is, by invoking the aid of the great angels, to serve as a protection against the evil spirits which may attack either the mother or new-born infant.

Superstitions and folklore of one part of the country have been transported to another, and there, after taking root, may have become incorporated as original. In our own country scores of superstitions have become incorporated; scores are totally original. If you should care to prevent a child from convulsions take heed of the following remedy! Suspend from the infant's neck a rattle. The superstitious treatments of snake-bites are numerous. Cut a live chicken in two and make external applications with the warm flesh. The internal use of alcohol has been entertained. Even in our own day the selling of amulets remains a flourishing business. Gold beads worn about the neck are supposed to cure sore throat, cure or prevent goitre, and prevent quinsy. For the condition of poisoning, a number of superstitions have been advocated for cure. Thus to cure all poisons the use of unicorns' horns was advised. The quacks were quick to take advantage of this to enrich their own wealth and gull the public. And don't forget to rub your hands with the first snow so that you will not have sore hands all winter. Take the tip from the ancient sailors who used to pierce their ears to strengthen their eyes. Piercing the ears to this day is believed to cure weak eyes.

For the sufferers from rheumatism many cures are suggested. First of all wear a brass ring on the little finger. If that is not remedial, try carrying a horseshoe nail in your

pocket, or carry around a rattle tied to a string.

The nose-bleed sufferers have a choice selection of superstitions. If one should fail, by all means try another. By that time the nose-bleed will probably have stopped naturally, and, of course, all credit goes to the superstition. A few are: wear red beads about the neck; hold up the right arm; put a key down the back; place a wad of paper between the upper lip and the gum; and last, but not least, try the prevalent remedy of chewing brown paper.

By this time one has undoubtedly noticed the prevalent use of red. Amongst the whole story of magic the appeal of color is outstanding. It is even epidemic today that white signifies joy or purity, and black signifies sorrow. One of the most appealing colors of medicine is red. The analogy with blood probably explains this importance. Since red is symbolic of blood it would be expected that red wines are thought to be more efficient than white wines in the treatment of anemia. Red is supposed to chase evil spirits away. Thus red flannels came into use, since the red would chase the evil spirit of cold away. Besides signifying danger, an association of red with pleasure has developed, hence the expression "paint the town red." Now, if all this talk of red has nauseated you, tie a red string about the waist and your "cure" will be forthcoming.

Perhaps the majority of people think that a wart is caused by contact with a toad. A wart is really a superabundance of connective tissue covered by epithelium. A mole is nothing more than a pigmented wart. Medicine has ways and means of removing these, but our superstitious inheritance persuades us to try the simpler methods of removal first. Hence a few of these will be mentioned. You may rub the wart with one of the following juices: celandine, dandelion, "milk-thistles," milkweed, or Osage orange. Fresh cream, or the water from a hollow oaken pump is also recommended. Other well known superstitious treatments for warts are: take a string and tie it full of knots, then bury the string at a crossroads in moonlight; grease the wart with stolen bacon and then hide the bacon; cut an

onion into slices, rub the wart with each slice, and then bury all the slices; rub the wart with beans, then throw the beans in a well; rub the wart with the sole of your shoe, and the wart will depart as the sole wears away.

A sty is merely an inflammation of a hair follicle on the eyelid. Well-known superstitions are supposed to alleviate this condition. Most of these have assumed the form of a rhyme. Who of us has not repeated, or at least has not heard others repeat at a cross-road:

"Sty, sty, leave my eye

And take the next one that passes by?"

Rubbing with a wedding ring is another well known "cure."

The true cause of hiccoughs is a spasm of the diaphragm. This is brought about through impulses coming from the brain by way of the phrenic nerves. There are all sorts of suggestions to relieve "hiccups." These include drinking water slowly; holding the breath; electric shock to the nerves; pressing the upper lip; counting to one hundred; slowly taking nine sips of water; or by trying for a long time to make the edges of the thumb-nails meet at the end. These "cures" all have a similar idea; namely, to divert the attention of the person. Due to this, or by the power of suggestion, the stimulus to the nerve is stopped.

Especially prevalent in our time is the notion that lockjaw is caused by a rusty nail. The tetanus bacillus, the organism responsible for this condition, is a normal inhabitant of the alimentary tract of animals. Naturally it is eliminated with the waste matter and is, therefore, found in fields and around barns especially. The organism must enter through an abrasion to cause lockjaw. Hence when it clings to a rusty nail, the nail by causing the abrasion, offers an inlet to the tetanus bacillus, which produces the condition. The mere fact that the nail is rusty has no connection with the condition. Rust is merely iron in the oxidized state, and the internal uses of oxidized iron are many. If we were to believe the superstitions we would try to allay the condition immediately by sticking the nail into hard wood, or by greasing the nail and then hanging it in the chimney.

Who of us has not heard of the superb treatment of hydrophobia with "mad-stones"? The cause is known, and the treatment of hydrophobia is at the disposal of physicians today. Pasteur in his epoch-making work perfected a vaccine to prevent the condition. The condition is caused by a filter-passing virus. The Boston Journal of Chemistry in 1879 tells us of a druggist in Texas who paid \$250 for a "mad-stone" which was endowed with the power of "curing" the condition. The "mad-stone" is supposed to act by drawing out the causative poisons. The stones so suspected to be endowed with this power are found in the internal organs of man and animals.

The mystery of the moon is fascinating today, as in earlier times. The earlier thinkers pondered heavily over the study of the moon. Modern medicine is really an inheritance of astrology, alchemy, and natural magic. Frascatorius, an early poet and physician, wrote of the maliciousness brought forth by the heavenly bodies when they assumed certain positions. This, he thought, was the occasion for the production of contagious diseases. Burton in his "Anatomy of Melancholy" says: "Paracelsus is of opinion 'that a physician without the knowledge of stars can neither understand the cause nor cure of any disease, either of this (melancholy) or gout, not so much as toothache; except he see the peculiar geniture and scheme of the party affected.' He gives instance in lunatic persons, that are deprived of their wits by the moon's motion; and in another case refers all to the ascendent, and will have the true and chief cause of it to be sought from the stars." All sorts of notions, ideas, and suspicions may be expected to be laid upon anything which is mysterious. For centuries the moon has suffered from accusations and enjoyed attributions. The moon is supposed to cast spells on certain individuals, making them mentally delinquent. Consequently the word "lunacy" came into use to describe this condition. The inheritance of the belief of the powers of the moon in revealing knowledge and casting spells has adhered to the minds of people to our day. Thus thrives Jane Adams in her astrological work.

Death omens flood our minds. In Orange County, Virginia, it is supposed to be a sign of death to see a tree blossoming in the fall. In Massachusetts it is commonly believed that a person will die if a doctor is called on Friday. And alas! beware of that ringing in your ears, for it is a sign of death.

When studying some of the practices of the South African Kafir tribes, one begins to wonder how such a tribe really exists. It seems to be the infants here who draw all superstitious attention. Just as a matter of good luck the fingers of an infant are plucked and bled. This is done immediately following childbirth. It next has to be proven that the infant is not bewitched. To prove this a huge fire is built, and the infant is held in the smoke. The occurrence of coughing or sneezing indicates that the child is not bewitched. Obviously a good many lives are sacrificed, because a baby suffocates before it sneezes or coughs. Cow dung is next thoroughly rubbed over the skin. Even after all of this the torture treatment of the infant is not over. At first it is not allowed to suck at its mother's breast, but instead is fed sour cow's milk. The swallowing process is forced by the tribesmen blowing down the throat of the infant.

A certain class of Japanese doctors used to rely chiefly on the pulse for all diagnoses. These doctors worked under the idea that in each wrist three pulses are to be found. Naturally they knew little of anatomy and physiology. The heart, they believed, controlled the right upper pulse; the lungs, the left upper pulse; the stomach, the right middle pulse; the liver, the left middle pulse; the right kidney, the right lower pulse; and the left kidney, the left lower pulse. After thus diagnosing all diseases by examining all the "six pulses" the doctor next proceeded with his own cure.

There exists a condition known as "falling palate" which seems to be especially common in negroes. The condition is really an inflammation of the uvula. As with most other conditions, a certain superstitious treatment has developed here. A silver spoon is employed to press the uvula upward. While this is being done a tuft of hair on the head must be given a strong jerk. Negroes used to take care

to cultivate well certain tufts of hair, grown especially for this one purpose.

An old French priest was recently telling me of one of the most popular superstitions of his boyhood days. It was a treatment for freckles. Thus, to alleviate such a condition one has merely to cut a grape vine and express the juice. This juice is then to be rubbed on the freckled face and the freckles are supposed to disappear. Many people of supposedly religious nature today have the religious elements all confused. Not so very long ago a person was suffering from tuberculosis. It seems as if this bedridden sufferer thought that all his pain came from the evil spirits dwelling under the bed. Therefore, when the priest would come and sprinkle holy water the sufferer manifested great relief as he thought the holy water chased away the evil spirits.

It seems probable, then, that some of the prevalent forms of cults have emanated from old superstitions rather than from the view of divine inspiration as expressed by Andrew Still, father of osteopathy. Especially would this seem to be true of chiropractic. A one time resident of the mountains of Northern Italy told me of a popular practice there which seems to have been handed down through the generations. It seems as though each town had its own domesticated bear, whose function it was to trample down the backs of those afflicted, following the vertebral line, with the person lying face down. This was supposed to be a rather certain system of cure. One may look upon the modern chiropractor, therefore, as replacing the domesticated bear. This seems a rather favorable change, for with a thought one may appreciate how much easier it is to train a man than to train a bear.

Certain superstitions may tend to disappear, yet new superstitions are continually presenting themselves. Man cannot get away from them. They follow as a result of his superstitious heritage. And many older ones are reclothed with new words. In this manner old ideas are portrayed as new concepts. The very element of superstition is the mind, and the mind is easily betrayed. There are many cults which take advantage of the mystic and

unknown to create an old idea into a "new science," and to allure the lay public, too many of whose minds have remained stagnant and anchored to superstition.

BIBLIOGRAPHY

1. Robinson, Victor: Story of Medicine, Albert & Charles Boni, p. 3, 1931.
2. Fishbein, Morris: Shattering Health Superstitions, Horace Liveright, Inc., 1930.
3. Fishbein, Morris: Fads and Quackery in Healing, Covici, Friede, Publishers, 1932.
4. Bergen, F. D.: Current Superstitions, Houghton, Mifflin & Co., 1891.
5. Wright, Jonathan: White Man's Magic in Homer, Scientific Monthly, 9:550-560 (Dec.) 1919.
6. Harrison, James B.: Popular Medical Errors, Chambers' Jour., Edinburgh, 14:364-365 (Dec.) 1850.
7. Melchoir, J. J.: Medical Delusions of the Olden Times, Harper's Mag., 34:250-258 (Jan.) 1867.
8. Miller, Jos. L.: W. Va. Med. Jour., 19:465 (Nov.) 1933.
9. Spencer, Herbert: Professional Institution, Pop Sci., Mo., 47:164-175 (June) 1895.
10. Hoffman, W. J.: Popular Superstitions, Pop. Sci. Mo., 50:92-100 (Nov.) 1896.
11. Hawkins, John: Magical Medical Practice in South Carolina, Pop. Sci. Mo., 70:165-174 (Feb.) 1907.
12. Kahn, Max: Vulgar Specifics and Therapeutic Superstitions, Pop. Sci. Mo., 83:81-96, (July) 1913.
13. Miller, T. M., and Churchill, J. & A.: Malevolent Spirits, Nature, 74:28-29, (May 10) 1906.
14. Geare, Randolph I.: Magical Cures, Sci. Amer., 97:132-133, (Aug. 24) 1907.

DELAWARE ACADEMY OF MEDICINE

The annual election of the Academy was held January 29, 1935, with the following results:

OFFICERS

- President, Lewis B. Flinn, M. D.
 1st Vice-President, Charles E. Wagner, M. D.
 2nd Vice-President, E. Harvey Lenderman, M. D.
 Secretary, John H. Mullin, M. D.
 Treasurer, William H. Kraemer, M. D.

DIRECTORS

Honorary Members: Mrs. Henry B. Thompson, Mrs. Ernest du Pont, Mrs. Frank G. Tallman, Mrs. Julian Ortiz, Mrs. H. Rodney Sharp.

Active Members: W. S. Carpenter, Jr., H. F. du Pont, F. G. Tallman, S. D. Townsend, Irene du Pont.

COMMITTEES

Executive Committee: Composed of the officers, the chairmen of all standing committees, a representative of the Medical Society of Delaware (W. O. LaMotte), the Delaware State Dental Association (P. A. Traynor), and the Homeopathic Medical Society of

Delaware (V. D. Washburn) and also two members of the Academy elected at large (L. J. Jones, M. D., and J. D. Brown, D. D. S.)

Library Committee: W. E. Bird, M. D., Robert E. Price, D. D. S., James G. Spackman, M. D., W. O. LaMotte, M. D., I. M. Flinn, M. D.

Scientific Committee: J. S. Keyser, M. D., C. R. Jefferis, D. D. S., Willard F. Preston, M. D., Raymond F. Moore, M. D., O. S. Allen, M. D.

Admission Committee: J. P. Winthrop, D. D. S., G. W. Vaughan, M. D., Henry W. Wilson, M. D., Julian Adair, M. D., J. D. Niles, M. D.

House Committee: L. J. Jones, M. D., G. C. McElpatrick, M. D., J. D. Brown, D. D. S., D. T. Davidson, M. D.

The terms of the foregoing elects begin on April 1, 1935.

After 65—What Then?

Have you made the grade and accumulated a "rainy day reserve" to meet your requirements as long as you (and or your life partner) live?

No! Then——

If a palatial, clublike Medical Arts Home was erected, convenient to Chicago, with perhaps another adjacent to the National Capital and still another somewhere in California, where for from \$2,000 to \$5,000 you could purchase life membership to retire "After 65"—to go to live, not to die, among your own kind and generation—would you be interested?

Such a plan is under consideration by a group of American philanthropists willing to provide the grounds and buildings as a memorial to medical science, providing a sufficient number of aged men and women in the medical and allied arts would appreciate such operations enough to become members. If "Yes" is the answer, representing the consensus of opinion of a sufficient number of the profession interested, then a dream may become a reality. For further particulars address:

H. W. Phillips, Counselor
 Old Peoples' Home Foundation,
 New Carlisle, Indiana.

EDITORIAL

DELAWARE STATE MEDICAL JOURNAL

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W. EDWIN BIRD, M. D. EDITOR
Du Pont Building, Wilmington, Del.

WILLIAM H. SPEER, M. D. Associate Editor
917 Washington St., Wilmington, Del.

M. A. TARUMIANZ, M. D. Associate Editor & Bus. Mgr.
Du Pont Building, Wilmington, Del.
Telephone, Wilmington, 4368

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VOL. VII FEBRUARY, 1935 No. 2

CANCER CLINICS IN WILMINGTON

The recent opening of the Carpenter Memorial Clinic at the Homeopathic Hospital adds another unit to the facilities in Wilmington for the treatment of cancer, and as such is welcomed. The new clinic is equipped with a 200,000-volt deep therapy machine and plans to use radium seeds (gaseous emanation) which it will get from the Jeannes Hospital at Fox Chase. At present it does not have any radium element. The attending staff is being trained in the use of this new armamentarium.

The publicity attendant upon the opening of the new clinic served to remind the public that such facilities have been available and successfully used here for several years. Since 1929 the Wilmington General Hospital has had 175 milligrams of radium element and a

therapy machine that delivers 130,000 volts. For ten years prior to this, radium seeds were secured in Philadelphia. Since 1931 the Delaware Hospital has had a 200,000-volt machine and the use of the radium element from the Wilmington General Hospital. Likewise, for many years prior to this, the Delaware Hospital has been using the seeds. In both of these hospitals there has been developed a personnel expert in the handling of this equipment. In consonance with the modern teaching that cancer has long since ceased to be a "one-man disease," the cancer patient has been examined and treated by a group—the family physician, the surgeon, the radiologist and the pathologist. This time-tested method is the one that will be used in the new clinic.

Thus, while the Homeopathic clinic brings nothing *new* to Wilmington's cancer facilities, it does bring *more* of the equipment which this city needs. The new clinic will doubtless appeal to some patients who were not aware of the previously existing ones, and it should assist materially in reducing the necessity of patients traveling to other cities, with its attendant inconvenience and expense. These are "ends devoutly to be wished."

Even with this additional *machinery* for cancer, Wilmington is still lacking in *beds* for cancer. This protean disease is frequently a long and expensive one. What this city needs most, so far as cancer is concerned, is an adequate supply of endowed beds. We need at least twenty such beds, which would cost five dollars a day to maintain, or \$36,000 a year. What charitarian will give the \$600,000 necessary to endow such badly-needed facilities?

The *Literary Digest* of February 9th (Page 17) quotes excerpts from our January editorial on the Epstein Bill for compulsory health insurance. We feel flattered that the *Digest* found this editorial of interest: we would have been better satisfied had the *Digest* made plain to its vast public the fact that we are not inimical to the insurance prin-

eiple, but that we are opposed—unalterably opposed—to the compulsory type of insurance, and that the entire experience of the world in the realm of compulsory health insurance gives us ample reason to be thus opposed.

Our apologies: it was just one of those things that happen sometimes. Our January issue was the first of a new volume, and the text pages should have been numbered 1 to 20, whereas they were numbered 297 to 316. This error "got by" the compositors, the proofreaders, and the editor, which shows that times are not what they used to be. Please correct your individual copies: the annual index will refer to these pages as they should have been numbered.

THE JOURNAL extends to Dr. William H. Kraemer its sincere condolences over the loss of his wife in the appalling Mohawk disaster. Dr. Kraemer had landed in England only the day before, to study certain European cancer clinics. On the advice of his friends here he has continued his journey. He is due in Wilmington about February 23rd—a sad and empty homecoming. We assure Dr. Kraemer he has the deepest sympathy of the profession.

Do you read the ads? If not, you ought to, and for three good reasons: first, you may see something that you need; second, you may learn of something new; third, if you are "not in the market" for anything, you will at least learn who are your friends—your advertisers, who make possible the publication of THE JOURNAL. These advertisers frequently offer booklets, samples, cigarettes, etc.: show them that you have read their advertisements by writing for their booklets and samples. Better still, buy what you need from them: you do business with those who do business with you.

WOMAN'S AUXILIARY, A. M. A.

President, Mrs. Robert W. Tomlinson, Wilmington, Delaware.

President-elect, Mrs. Rogers N. Herbert, Nashville, Tennessee.

It is with a great deal of pleasure that I can tell you this month that I have made one trip to Atlantic City and spent a delightful day with Dr. and Mrs. Carrington. Dr. Carrington is the chairman for the convention and is so full of plans and enthusiasm for the meeting that when you get there you will realize the spirit that has made this one of the best meetings ever held.

The Ambassador Hotel will be the headquarters for the House of Delegates for the American Medical Association, Haddon Hall for the Canadian Medical Association and the Traymore for the Auxiliary. It is on the boardwalk, not far from the huge Convention Hall where all of the men's meetings, the scientific and commercial exhibits will be held.

Within the next few days I expect to go down there again and soon I hope that I will be able to give you the name of our chairman. Dr. Carrington and I went over many things and I am sure you will appreciate that our hope is to make the most of the many attractions that are Atlantic City's alone. The piers, the boardwalk, the sea food, the sun and sea air combined with splendid hotels and a spirit of welcome that is unsurpassed, our Canadian visitors and our own pleasure at renewing old friendships will provide us with an opportunity to accomplish much, to play hard and go home refreshed by our stay in our country's greatest seashore resort.

Since I last sent a message to you through this News Letter, I have spent two delightful weeks in San Antonio, Houston, New Orleans, Mobile, and Nashville. The Southern Medical meeting was one never to be forgotten and the hospitality of our southern members fills me with a great feeling of appreciation. The two days that I spent with your splendid president-elect were full of pleasure. You have chosen well, and Mrs. Herbert's desire to do all within her power to give you a fine administration bespeaks her sincerity of purpose. I can only ask for her the same co-operation and loyalty that you have given me and my predecessors.

I should be highly gratified if I were to receive more answers to my letters that I sent to the National Board in December. Now that

Christmas is over, and we hope the gripe subsided, if you have a few moments to spare please write me your opinions and ideas on plans for next June. It is your convention, and I want everyone to have some portion in it and to follow as far as possible your wishes.

Let us all put our shoulders to the wheel and then we will realize fully our strength. I cannot close without a word of appreciation of your fine work and altruistic motives. I thank you from the bottom of my heart.

MRS. ROBERT W. TOMLINSON.

MISCELLANEOUS Sectional Meeting: A. C. S.

A Sectional meeting of the American College of Surgeons for the states of Delaware, Maryland, Virginia, West Virginia and the District of Columbia will be held in Washington, D. C., on April 11 and 12th, 1935. The program will include Surgical Clinics, at the various hospitals, Hospital Conferences and Medical motion pictures directed by Doctor Malcolm T. MacHachorn, Associate Director of the American College of Surgeons, during the day, and in the evening, a Scientific session on April 11 and a Public Health Community meeting on April 12. A special section will be devoted to eye, ear, nose and throat surgery. The local committee on arrangements consists of R. M. LeComte, chairman; E. W. Titus, secretary, and W. B. Marbury, counselor, with Doctors H. W. Lawson and C. S. White, who handled the last sectional meeting held in Washington, as members, together with the chairmen of the various sub-committees as follows:

Doctor D. B. Moffett, registration and information.

Doctor James A. Cahill, Jr., program.

Doctor D. L. Borden, clinics.

Doctor Huron W. Lawson, community health meeting.

Doctor Wm. P. Herbst, speaking arrangements.

Doctor F. A. Router, publicity and education.

Doctor F. A. Schreiber, finance and audits.

Major Harry A. Bishop, M. C., U. S. A., governmental medical services.

The medical profession in general, as well as the Fellows of the American College of Surgeons in the states noted, are invited to attend, and invitations to the Community Health meeting will be sent to 10,000 of the lay residents of the District of Columbia.

A separate Community Health meeting for Negro residents of the District of Columbia will be held on the evening of April 12th, with Doctor E. C. Wiggins, president of the Medico-Chirurgical Society, presiding.

American Neisserian Medical Society

The American Neisserian Medical Society was founded on June 12th, 1934. It is dedicated to the promotion of knowledge in all that relates to the gonococcus and gonococcal infections, that there may be attained improvement in the management of gonorrhea and a reduction in its prevalence. There are 115 charter members and the officers are:

EXECUTIVE COMMITTEE

Dr. Edward L. Keyes, New York, Honorary President; Dr. J. Dellinger Barney, Boston, President; Dr. P. S. Pelouze, Philadelphia, Vice-President; Dr. A. L. Clark, Oklahoma City; Dr. Walter Clarke, New York; Dr. R. D. Herrold, Chicago; Dr. N. A. Nelson, Boston; Dr. Oscar F. Cox, Jr., Boston, Secretary-Treasurer.

The society plans to carry out the following program:

A. The scrutiny of the management of gonorrhea in both male and female.

B. Clinical and laboratory research in the diagnosis, medical and social pathology, and the treatment of gonorrhea.

C. Dissemination among the medical profession and the public of authoritative information concerning gonorrhea.

Membership is limited to:

A. Residents of the United States or its territories, Canada or Mexico.

B. Graduates of a medical school recognized by the American Medical Association.

C. Those who are engaged in some phase of the management of gonorrhea.

Invitation to membership is extended to all qualified physicians who desire to work for

improvement in the management of gonorrhea. Application blanks can be obtained from the undersigned.

OSCAR F. COX, JR., M. D., Secretary.
475 Commonwealth Ave.
Boston, Mass.

Propaganda for Reform

Dihydroxy-Anthranol (Anthralin). — The Council on Pharmacy and Chemistry authorized publication of a preliminary report on dihydroxy-anthranol, submitted by the Abbott Laboratories, which has been employed as a substitute for chrysarobin in the treatment of various skin disorders. The Council voted to accept the name Anthralin as a non-proprietary designation for dihydroxy-anthranol. Anthralin is practically insoluble in water but readily soluble in the more complex organic and lipid solvents—a feature of distinct advantage in the preparation of ointments, lotions and pastes. Studies of the effect of the drug in psoriasis, pityriasis rosea, seborrheic dermatitis and mycotic skin infections have been quite extensive. European observers have been particularly exhaustive in their observations in psoriasis. Beerman, Kulchar, Pillsbury and Stokes (*Jour. A. M. A.*, Jan. 5, 1935, p. 26) report on the use of the drug in fifty resistant cases of psoriasis of from five to twenty years' duration. Of all these cases only two had been completely cleared by various combinations of other modes of therapy. The use and effectiveness of Anthralin in disease of the scalp is particularly significant, since chrysarobin, by reason of its conjunctival irritation, cannot be so employed. Although the Council appreciates the vast foreign work that has accumulated regarding dihydroxy-anthranol, it has deferred consideration of Anthralin until such time as more adequate investigations of the nature, properties and pharmacologic and toxic actions of the drug shall have been reported. (*Jour. A. M. A.*, January 5, 1935, p. 48).

Cevitamic Acid and the Brand Cebione-Merck.—The Council on Pharmacy and Chemistry reports that under the name "Ascorbic Acid," Merck & Co., Inc., presented for the Council's consideration its preparation of the crystalline vitamin C isolated by Szent-

Gyorgyi. By reason of its rules against therapeutically suggestive names, the Council could not recognize the name "Ascorbic Acid," but voted to recognize the name "Cebione" for the firm's product if it could prove its right to a proprietary name. Meanwhile the Council adopted the term "Cevitamic Acid" as a non-proprietary designation for crystalline vitamin C. Merck & Co., Inc., then presented written permission from Szent-Gyorgyi for the use of its proprietary name "Cebione," and the Council voted to recognize this as the proprietary name for the Merck brand of cevitic acid in recognition of the discoverer and of the service of the firm in making the product available for therapeutic use. The Council feels strongly that investigators in naming newly discovered medicinal substances should bear in mind the fundamentally sound objections to the use of therapeutically suggestive names. (*Jour. A. M. A.*, January 12, 1935, p. 121).

Claims for Anayodin.—A circular letter from Ernst Bischoff Company on Anayodin contains the following statement: "Anayodin comes nearest to being the ideal amebicide. It safely rids the intestinal tract of amoebae, usually with a single treatment of four pills three times a day for eight days." The statement is far too optimistic. There is no known amebicide that can be depended on to eradicate *Endamoeba histolytica* from the intestinal tract with a single course lasting eight days. Such propaganda is exceedingly unfortunate. Anayodin is a proprietary name for chiniofon-N. N. R. The Council on Pharmacy and Chemistry has considered Anayodin and found it unacceptable for New and Non-official Remedies. The Council has accepted the following brands of chiniofon: Chiniofon-Searle and Chiniofon-Winthrop. (*Jour. A. M. A.*, Jan. 12, 1935, p. 139).

VegeMucene Not Acceptable for N. R. R.—The Council on Pharmacy and Chemistry reports that workers at the Michael Reese Hospital have recently reported seventeen cases of proved gastric or duo-denal ulcer relieved, symptomatically, following the administration of a mucilaginous plant substance (in contradistinction to gastric mucin) (*Illinois M. J.*, October, 1933). The material used in this

work consists of powdered dehydrated okra, now marketed under the name of VegeMucene by BioVegetin Products Incorporated, which presented the product to the Council for consideration. The clinical studies made of the product, thus far, are so inadequate as to preclude any possibility of arriving at a fair estimate of the therapeutic value of the substance. The name is objectionable, as it implies that the substance is mucinous or mucoid in character, yet it is not a true mucin as the term is ordinarily employed; it resembles mucin in physical properties only. Notwithstanding the very limited studies thus far reported, the firm states in one of its advertising brochures that: "Extensive clinical tests have shown VegeMucene to be extremely effective in the treatment of patients suffering from peptic and duodenal ulcer." It is pointed out that these patients were maintained on a modified ulcer diet which of itself undoubtedly would have effected a significant improvement in the majority of cases. The Council has been informed that the board of directors of BioVegetin Products, Inc., has taken formal action endorsing lay promotion of VegeMucene. Thus the preparation has been thrust definitely into that vast realm of "ulcer cures" so elaborately exploited to the general public. The Council declared VegeMucene not accepted for New and Non-official Remedies, because it is an unoriginal preparation of powdered okra, marketed under a non-informative and misleading proprietary name, and promoted with exaggerated and unwarranted therapeutic claims to the profession and to the public. (*Jour. A. M. A.*, January 26, 1935, p. 316).

Min-amin.—The Bureau of Investigation reports that during the past few months a large number of inquiries have been received asking for information on a preparation for the treatment of obesity known as "Min-amin." The only information regarding the composition of Min-amin that appears on the trade package is the vague statement that it is "a combination of pure food concentrates containing minerals and vitamins." The product is manufactured by the National Institute of Nutrition, Los Angeles, and is recom-

mended for the treatment of obesity by Dr. William Brady, whose syndicated health columns appear in a number of papers throughout the country. Dr. Brady propounds the thesis that much good, wholesome food is deficient in vitamins and minerals, and that the obese eat more food than their bodies require because of an unsatisfied hunger allegedly due to the fact that they are getting insufficient vitamins and minerals. He recommends the use of Min-amin and says: "With Min-amin, which is a concentrate of the essential minerals and vitamins in the proper proportion this deficiency of every day diet is corrected...." One original specimen of Min-amin was examined in the A. M. A. Chemical Laboratory and found to consist essentially of a relatively pure sample of wheat germ. Essentially, the directions are for the obese to eat no breakfast and no luncheon, but to take instead of each of these meals a rounded teaspoonful of Min-amin in an eight-ounce glass of freshly-made unstrained orange juice. For dinner, or the evening meal, they must eat no breadstuffs, no potatoes, no fats, no sweets, and if a salad is used, it should be made with mineral oil. The obese are told that this regimen does not constitute "self-denial!" No definite statements are made regarding which vitamins are present in Min-amin, nor is there any hint, either in terms of recognized vitamin units or otherwise, as to *how much* of each vitamin may be present! Wheat germ is rich in vitamin B. On the Min-amin theory, then, one would be led to expect that the obese had an unsatisfied hunger because of lack of vitamin B in their normal diet. The facts are, however, that it is rather generally held that lack of vitamin B in the diet definitely causes a *loss* of appetite instead of an *increase* of appetite. (*Jour. A. M. A.*, January 26, 1935, p. 335).

BOOK REVIEWS

The Autonomic Diseases, or the Rheumatic Syndrome. By T. M. Rivers, M. D. Pp. 299. Cloth. Price, \$3.00. Philadelphia: Dorrance and Company, 1934.

This is an exceedingly well-written book, scientifically accurate, the subject matter timely, in that so much is at present being written on all phases of it, and the conclu-

sions arrived at remarkable and clearly set forth.

Whether we agree or not with some of the premises, the author has endeavored to lay a broad basis for the better understanding of various diseases which he has grouped under the heading "autonomic syndrome." These are those which have in common characteristics of disorders of organs supplied by the cranio-sacral group of sympathetic nerve fibers. These include rheumatoid arthritis, hypotension, the common cold, hay fever, etc., and are all subjected as to etiology to some allergen which in many cases is chemically related to or actually is an amine.

One new conception is that rheumatoid arthritis begins in childhood and only manifests itself typically in adult life. He sees a common factor in rachitis in childhood and hopes that anti-rachitic therapy will decrease the incidence of arthritis in adult life.

All in all the book is well worth reading. It is not too technical for the intelligent layman nor too simple for the average physician to obtain at least a broader point of view concerning many common disorders.

Human Anatomy: Double Dissection Method. By Dudley J. Morton, M. D., Associate Professor of Anatomy, Columbia University. Two vols. pp. 560: illustrated. Cloth. Price \$6.00. New York: Columbia University Press, 1934.

Dr. Morton's two volumes represent his new system of teaching anatomy so that the student may get a comprehensive idea of the subject in one year of about 360 hours. Two dissections are done, the first covering only the larger structures and giving a bird's eye view of the whole body. The second dissection covers the finer morphology, and requires no additional endeavors. We are impressed with the system, and have no doubt it will find wide acceptance. An otherwise grinding subject is made popular with the students, who have done exceptionally well before the state boards.

The Crippled and the Disabled. By Henry H. Kessler, M. D. Pp. 337. Cloth. Price, \$4.00. New York: Columbia University Press, 1935.

This work is a detailed study of the physically handicapped and the problems involved in their care and rehabilitation. The present legal provisions are evaluated and suggestions made for more adequate and uniform legis-

lation. The book is a veritable store-house of information on the subject, and the author's viewpoint strikes us as eminently fair—the work is, in fact, an exposition rather than an argument. It can be recommended heartily as a source-book.

How to Practice Medicine. By Henry W. Kemp, M. D. Pp. 156. Cloth. Price, \$3.00. New York: Paul B. Hoeber, Inc., 1935.

This manual of advice to graduates beginning to practice covers the territory all the way from equipping and opening an office to geriatrics. The advice generally is good, even if a bit soquatic in spots. Our most serious objection is to the author's contumely (Chapter VIII) of the medical society that permits its members to *read* papers before it. The style is entertaining.

Hughes' Practice of Medicine, 15th Edition. Edited by Burgess Gordon, M. D., Associate Professor of Medicine, Jefferson Medical College. Pp. 808, with 61 illustrations. Fabrikoid. Price, \$5.00. Philadelphia: P. Blakiston's Son and Company, 1935.

This popular hand book has been extensively revised and completely reset. Many new subjects have been added, and all of the recent advances have been included. The new edition fully deserves the immense popularity accorded its predecessors.

Sculpture in the Living. By Jacques M. Maliniak, M. D., formerly Major, Reconstruction Hospitals, Allied Armies. Pp. 203, with 70 illustrations. Cloth. Price, \$3.00. New York: Lancet Press, 1934.

Dr. Maliniak's large experience in plastic surgery justifies his literary excursion. The procedures outlined are orthodox, the technique is made adequately clear and the excellent illustrations complete the presentation. The concluding chapter on the Legal and Illegal aspects is a splendid commentary on the dignified field of plastic surgery as opposed to the so-called art of the beauticians. This is one of the better books on this subject.

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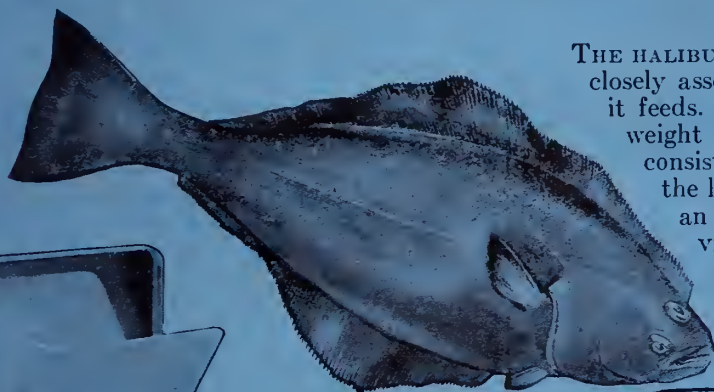
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THE RESULTS OF HIGH VOLTAGE X-RAY TREATMENT IN METASTATIC CARCINOMA OF BONES *

GEORGE C. McELPATRICK, M. D.
Wilmington, Delaware

The purpose of this paper is to acquaint the profession of the importance of the diagnosis and treatment of metastatic carcinoma in bones.

We have encountered more cases of metastases in the last two years than previously, due, no doubt, to more interest and research in the cancer problem, and to the tumor clinics which started in our state nearly two years ago. After encountering several cases of metastatic carcinoma, the question of treatment became necessary, but there were few cases in our own state or counties which gave us any opportunity to observe.

It has been known that metastatic carcinomas in bone are secondary to the primary growth in some other part of the body and have the same characteristics. Many writers have attempted to establish the route by which the carcinoma cells travel from the original tumor to the bones. It is generally accepted that there are two routes by which they travel: the lymphatic system as the early and usual route, and the blood stream, by which it reaches the bone marrow. Metastatic growths in bones are found where red bone marrow persists, as in the ribs, the sternum, the pelvis, the vertebrae, and the end of the humerus and the femur.

Broders has stated that carcinomas graded 4 and 3 are prone to produce metastatic growths, whereas those of 2 and 1 do so much less frequently. Metastasis from the gastrointestinal tract, for example, is rare compared with that from carcinoma of the breast or

carcinoma of the prostate. Metastasis from the body of the uterus is relatively infrequent since it is usually of the lower grades, whereas carcinoma of the cervix, which has a higher average of malignancy, frequently gives rise to metastatic growth to bones.

The taking of x-ray plates of the bones of the body with the improved technic and skillful interpretations of the pathological changes in bones have made it possible for more accurate diagnosis of the metastatic lesions. The roentgen-ray examination gives us the extent of involvement and also whether there are multiple or single lesions through the body, and also gives a pretty clear conception of the grade of carcinoma we are dealing with. It is not at times possible to get biopsy of bones, whereas the patient will submit to an x-ray examination in preference to operation.

Most of our cases were diagnosed by x-ray findings and were sent for examinations because of the severe pain which came on several months after removal of the primary growth. Severe pain was the outstanding symptom and the only symptom given by the patient, although involvement was extensive, for, no doubt, the metastatic growth had been there long before pain had occurred. There are many cases of metastasis which give no pain. We have seen by x-ray examination of the ribs where four inches of the ribs showed complete destruction and the patient had no pain in this area. If metastasis is localized centrally in bone marrow and does not invade the periosteum, there is no pain. Therefore, patients complaining of pain in any part of the body, before or after removal of a growth, should have an x-ray examination to see if metastasis has occurred, and if this has occurred before the removal of the breast, prostate, cervix, or urinary bladder, these patients should be given a series of high volt-

* Read before the Medical Society of Delaware, Dover, October 10, 1934.

age x-ray treatments before as well as a series after removal.

As stated by Giles, "skeletal metastasis occurs with sufficient frequency to make its clinical recognition an important factor in the amelioration of its symptoms. The widespread use of the x-ray during the past decade has led to a great increase in the knowledge of those neoplasms that produce secondary deposits in the osseous system."

The importance of an early diagnosis of metastasis of patients who are to be operated on should not be overlooked, as many leading surgeons agree that evidence of distant metastasis to the viscera or bone renders any primary tumor inoperable. The roentgen examination of the bones of the body can establish a definite diagnosis, so you must have a history together with the x-ray interpretations (with the characteristic irregular, moth-eaten destruction of the bone with slight periosteal reaction), and the discovery of the primary tumor.

Carcinoma of the breast is one of the most frequent primary tumors metastasizing to bones. Metastatic cancer from the breast in bone is a disease occurring in middle or late life. The majority of the lesions occur between 35 and 55. With the x-raying of the bones of the body there is more accuracy, and this has helped us considerably in the study of the incidence of bone metastases.

Pain of severe rheumatic character is one of the important symptoms and when the metastatic focus is in the spine girdle pains and neurologic manifestations are present. Some have abdominal pain, and pain in the sciatic nerve. There is numbness of the legs and arms, and sometimes spastic paralysis or weakening of the extremities, and also metastatic deposits in the extremities themselves coming on with sharp pain and stiffness of the joints and swelling of the affected limbs. The patient may be seized with excruciating pains requiring large doses of morphine. These pains persist, but after several weeks these parts should be x-rayed to see if there are any pathological changes. Any pain lasting for a week, especially when there is a history of carcinoma, should be x-rayed to see if there is any metastasis.

If the patient has previously suffered for

months, and possibly for years, from terrible attacks of sciatica which only could be controlled by increasing doses of morphine, in getting roentgen-irradiation he will note less pain. These pains abate so that the patient can sleep undisturbed throughout the night without any form of analgesics and the patient will be able to move the legs and arms without pain, and finally will attempt to walk and will be able to go without aid of crutch or cane. In some cases patients are able to resume their former occupation.

One of the first signs by which our attention is called to the possible presence of malignant bone tumors is pain which varies in intensity and character. However, the fact that it is not influenced by position or mobility distinguishes it from pain resulting from other diseases of the bone such as tuberculosis. Whether the patient has or has not suffered any injury to the affected region of the body, x-ray examinations should be repeated at frequent intervals until a positive diagnosis has been made or pain has subsided. Often a diagnosis of rheumatism will be made merely because a patient complains of persistent suffering, whereas an x-ray examination should be taken to ascertain the definite cause of such pain.

The patients who receive roentgen-irradiation after the appearance of metastatic lesions, and especially after a radical operation, have an average duration of life of 18 months to 2 years. Irradiation is effective both in relieving pain and in accelerating repair and no doubt reduces the invasive power of the cancer, and some patients may show marked formation of new bone which increases the usefulness of the affected part of the skeleton. We know that after a series of roentgen-ray treatments, metastatic cancer may be made to retrogress and free the patient of all his symptoms.

In all cases of pain an x-ray should be taken and if the diagnosis is doubtful, x-ray therapy should be given because it cannot make the disease any worse and the response may be definite, showing us that the growth has been arrested, and also has helped to stop the spread of malignancy. X-rays taken both before and after radiation should be obtained in order to enable one to make a positive

diagnosis. It is only as a last resort that a biopsy should be performed.

The medical care of the patient with metastasis, whether multiple or single lesions, has opened up another field of treatment. If the patient is bedridden and far away from any center of treatment, morphine must be given to relieve the pain and little else can be done, but patients of this type should be hospitalized, as x-ray treatment will be their only hope of arresting or curing the disease.

Most of these metastases show a grave blood picture and a low hemoglobin. The anemia associated with this disease will require medical treatment and perhaps blood transfusion.

In metastasis of the lumbar or dorsal vertebrae, a plaster cast can be applied resting the lower end on the crest of the ilium and the upper end well in the axilla. This will reduce several pounds of body weight and relieve some pressure on these vertebrae. A small window can be cut in the cast opposite the vertebrae involved, and high voltage x-ray treatment can be given even with the cast on the patient. In cases where the bones of the forearm or the humerus are involved and where the disease is so extensive that a pathological fracture is likely to occur, we put on wooden splints and treat these areas with high voltage therapy thereby saving the patient the agony of a pathological fracture.

I presume the day will come when the hospitals of Delaware will have to allot a ward for certain types of cancer patients, especially those who are suffering from bone metastasis. Some of the patients we are treating have to be brought in the ambulance three times a week, and a patient with metastasis to bone needs hospitalization as much as the patient with pulmonary tuberculosis needs a sanitarium, since most of them are bedridden and crippled.

In the October issue of the Bulletin of the American Society for the Control of Cancer it is shown that the earliest cancer hospital was opened in the city of Rheims, France, in 1740, and was equipped with the modest number of twelve beds; thus Rheims has the honor of having provided the first hospital for the treatment of patients suffering from cancer. The honor then goes to the Middlesex Hospital, built in England in 1791. In our

own country also some cancer hospitals have been built; likewise certain sections in general hospitals have been set aside for the treatment of cancer patients.

Postoperative roentgen therapy requires an equipment of 200,000 volts capacity, and not an equipment suitable for diagnostic purposes.

BIBLIOGRAPHY

- (1) Borak, J.: The Analgesic Effects of Roentgen Rays, *Radiology*, 14: 425-338, (April) 1930.
- (2) Giles, Roy G.: Metastatic Tumors of Bone, *Tex. State Jour. Med.*, 27: 600-604, (December) 1931.
- (3) Report of Cancer Committee of Calif. Med. Asso., *Calif. and West. Med.*, 38: (May) 1933.
- (4) Sutherland, Charles G., Decker, Fred H., and Cilley, Earl I.: Metastatic Malignant Lesions in Bone, *Amer. Jour. of Cancer*, 16: 1457-1486, (November) 1932.

DISCUSSION

DR. CHARLES P. WHITE (Wilmington): Recently I had a patient who came to me complaining of hoarseness, difficulty in swallowing, and difficulty in breathing, and I took one look at his throat and sent him to Dr. Jackson in Philadelphia. Dr. Jackson referred him back to me with the report that this man had cancer of the larynx that was too far gone for operation. He recommended deep x-ray therapy treatment, so the man was sent to Dr. McElfatriek. After some weeks the result has been truly marvelous. The man thinks he is cured. He has no trouble in swallowing. He has no difficulty in breathing. Whether he is cured or not, of course you all know time alone will determine. I have heard since from Dr. Jackson once or twice concerning this man's condition, and he is highly commendatory of the way the work was done by Dr. McElfatriek. Whether the results are permanent or whether they are temporary, certainly the x-ray treatment in his case did a wonderful amount of good. It doesn't look like the same throat.

DR. KAPO (Salisbury, Md.): The treatment of metastatic carcinoma brings out another important use of the x-ray in the palliation of disease. It is not used enough for this purpose. Metastatic carcinoma is generally considered to be more responsive to x-ray therapy than is the original lesion. Any case of carcinoma that develops bone symptoms at any time up to twenty-five years after the original lesion has been taken care of should be suspected of having metastasis even though the x-ray examination might not reveal any definite lesion.

Deep bone pain should be suspected of be-

ing metastatic carcinoma, and should be properly treated as such.

Many cases have been recorded, particularly in breast cancers, where bone metastasis has occurred ten and fifteen years after the original lesion had been cleared up. The therapy is that not infrequently one or two cancer cells, which have been most resistant to x-ray, have been made quiescent, and that it has taken perhaps ten or fifteen years for them to get active again, and very frequently they do pass on to the bones.

Another indication for suspecting metastatic carcinoma, aside from bone pain, is a fracture that may occur in a patient that has had carcinoma. Very frequently a pathologic fracture in a patient of this type is suspected of being simply a bone cyst, and x-ray treatment is not instituted on the basis of it being a benign lesion. The fracture may heal up and another more extensive fracture occur subsequently, so that we find it wise to give x-ray treatment to such cases.

DR. IRA BURNS (Wilmington): May I take just a minute to congratulate Dr. McElfatrick on presenting what seems to be a very timely paper on carcinoma, especially metastatic carcinoma, for the one probably important reason at least that doctors generally have had the impression that the minute metastasis has taken place the patient is absolutely hopeless? Of course, usually the patient is hopeless from a recovery standpoint, but the fact remains that certain types of x-ray treatment do relieve pain, and very often decidedly arrest the activity of a metastatic lesion of the bone, as well as other tissues. It certainly is very commendable and a very definite step forward to use x-ray therapy.

I recall at least three cases, one of metastatic carcinoma to the body of the spine, which was treated elsewhere, and which was relieved very decidedly so far as the actual distress was concerned.

I know of one case of my own that I personally treated where metastasis was present in the greater trochanter and upper end of the femur, which was very definitely made more comfortable and relieved for quite some time. So, if for no other reason than that of therapy or relief of pain, it certainly is very definitely worth while.

Most of us, of course, recall the late la-

mented Dr. Palmer, who had a malignant lesion of the bone, and we took the 200 milligrams of radium, which was the property of the Wilmington General Hospital, out to his home and applied the radium to Dr. Palmer's humerus. Two hundred milligrams of radium is really quite a sizable dose, and for two or three days after the application of that he was very decidedly improved clinically and felt very comfortable, so that radiation, given either in x-ray therapy or by the use of radium, is usually resultant in such very definite improvement and comfort that from a therapeutic standpoint it is a good agency to use.

DR. WALTER W. ELLIS (Delaware City): In April, 1933, I was called to see a male patient, aged 65. At that time he was suffering with pain in both legs, more marked in the right leg than the left. I thought possibly he had just a rheumatic condition or sciatica from the pain in both legs. He did not improve under treatment, but got gradually worse. In May I sent him to the hospital for x-ray study.

The x-ray diagnosis was carcinoma of the fourth lumbar vertebra and metastasis to the sixth and seventh ribs posteriorly. By the time he went into the hospital he was having definite bladder symptoms, partial retention and no control. At times, probably about once every hour, he would have severe pains and pass two or three grams of urine with that pain.

That continued on. He was awfully sick in the hospital. The bladder symptoms were taken up first. He had a few irrigations of the bladder, rest in bed, and prophylactic treatment until October, 1933, when we sent him to Dr. McElfatrick for deep x-ray therapy. He was taken by ambulance to the hospital, and was carried from the ambulance to the treatment room on a stretcher; he was absolutely helpless in every way.

Dr. McElfatrick gave him a series of treatments: October 18, October 23, October 25, October 27, October 30; November 1, 6, 10, 17 and then less frequently, but by that time he was very much improved. His pain was decidedly less. His bladder symptoms had cleared up. There was no retention. He was passing normal urine in a normal way—not

a normal urine, because there was pus in the urine, but he had no trouble at all in that way from that time on, about January.

Since that time he has improved gradually with the exception of his secondary anemia, which of course has persisted, but this we expected. The last blood count we had made about two weeks ago was a little under two million reds, about one million eight hundred fifty thousand, and his hemoglobin was about 30 per cent. Since the first of the year he has had infrequent treatments: January 9, 17 and 25; February 14; March 3 and 13; June 4 and 6; July 12; August 17 and 19. He had some in September, I have not gotten those down. He is having them now about once in three weeks.

What impresses me about this case particularly is the relief of pain he gets after these deep x-ray treatments. Of course there is some reaction for the first four or five days after treatments, when he feels nervous and probably a little weaker, but then he will come back again, and he is fine over a period of three or four weeks, after which he commences having pain again, sufficient pain to require an opiate. If he goes over four weeks, probably we will have to give morphine sulphate, a quarter of a grain maybe, once a day or once in three or four days. But during the period of three to four days after treatment until about three weeks after, he is frequently free of pain, and we do not have to give him morphine.

That to my mind is one very strong point for the value of this therapy. Another is, I think the psychological effect is very good. This man does not know what is the matter with him, although his family all do, but he knows that we are trying to do something for him to relieve him, and he knows it does relieve the pain, and that it has kept his bladder symptoms relieved.

We don't expect this man to get well; the carcinoma has metastasized to different parts of different bones, for instance, the fifth and sixth cervical vertebrae, the border of the right scapula, and the right humerus. The original seat of the carcinoma, the fourth lumbar vertebra, by x-ray looks entirely different from what it did at first. It was massed down and looked like it was almost destroyed, but there has been a marked formation of new

bone in that fourth lumbar vertebra. I think this is a very good case to illustrate the value of the deep x-ray treatment. This patient is much better today than he was a year ago, and I am very sure in my mind that he would have been dead six months ago if the treatment had not been used. It has saved him untold agony.

DR. ROBERT W. TOMLINSON (Wilmington): I don't know that what I have to say is going to be particularly evidentiary of the necessity of roentgenological therapy post-operatively or post-diagnostically after the establishment of the incidence of metastatic carcinoma.

As I sat here this morning and heard this splendid rendition by Dr. McElfatrick, I couldn't help but feel its value as a poignant factor in the success which accrues to us as practitioners of medicine. It just so happens that it was my privilege as a younger man, and not an undergraduate in medicine, to effect a contact with Dr. McElfatrick when he first came to the Delaware Hospital. I was probably at that time better acquainted with the vagaries of livelihood and the exigencies of need which he had experienced in his undergraduate days. The courage of the individual and his unfaltering application and energy and the assiduous exposition of effort to accomplish something well always engendered in my mind a great admiration for the fortitude of the individual. I know him well enough that the activating factor in the presentation, or first in the compilation and then the subsequent presentation, of this paper is an attestation of Dr. McElfatrick's interest in medicine per se as an alleviative agent to the ills of humanity.

I think there was a trite opinionization of axiomatic facts which we would all do well to consider, and tersely it expresses the essentiality of having team-play not only in arriving at a diagnosis as to these pathological conditions which are evinced in the course of life, but it is also an attestation to the fact that today with the presence of Dr. McElfatrick, and Dr. Burns, and Dr. Allen, who are doing notable work in Wilmington, and with the investigative research of Dr. Gay from the pathological standpoint, which is corroborative of the diagnosis, and then afterwards the surgical and roentgenological therapy, the safety of the people of this state is in far bet-

ter hands than it has ever been at any time heretofore.

I want to compliment Dr. McElfatrik on the value of his paper, and also state the fact that it brings joy to my heart that we are now privileged so to have weaved the fabric of diagnosis and treatment subsequently to the establishment of diagnosis that we are better and will be better physicians as alleviative agents.

DR. B. M. ALLEN: Carcinoma is becoming such a large subject that it does not make much difference what phase of medicine you are interested in, we all come in contact with it.

I don't know anything about it, but I just want to ask Dr. McElfatrik a couple of questions because I don't know the answers thereto myself. His was a very good paper, and I enjoyed it very much.

As to x-ray treatment of carcinoma of the thyroid, what success are you having with that now; also mediastinal carcinoma, what success are you having with that? My impressions were, up until a few years ago, that metastasis didn't take place in the heart muscle or in the heart itself. I think probably that has been changed recently. I just want to know whether that is right or wrong.

DR. DOUGLAS M. GAY (Wilmington): First, I wish to express my enjoyment of Dr. McElfatrik's paper. As far as I know there are three ways in which to treat pain of advanced carcinoma: either by the use of drugs, by means of dissection of sensory nerves, or by irradiation.

We are all familiar with the effect of drugs in this treatment. The matter of sectioning the dorsal columns of the spinal cord is a thing to be attempted by very, very few men at present. The records of the Delaware Committee of the American Society for the Control of Cancer contain a great deal of evidence of the useful effect of irradiation in relieving pain. Aside from this the radiologists may accomplish something more of very great importance: in addition to keeping the patient alive for a considerably added number of years, and that in comfort and happiness and hope, he may also so hold the tumor in abeyance that some other cause of death may enter quite unrelated to the tumor.

DR. E. R. MAYERBERG (Wilmington): A few months ago you will recall the case we saw together, a man with a marked carcinoma of the larynx and the base of the tongue. Dr. Gay will also recall this case. That man was in an advanced stage. He was showing a marked cachexia, and when you saw him he had not been able to swallow for two or three months with any degree of comfort. He had been taking all sorts of remedies, and then you saw him, and I saw him, and we made a diagnosis, and sent him to Dr. Cleaver with the idea that some operative procedure on his larynx might be done, probably a roentgenological fissure; but he felt, as we did, that the lesion was too extensive and he advised against it and sent him home to die. He said that he thought probably deep x-ray therapy might do something, so we sent him to the hospital under Dr. McElfatrik, who didn't feel very good about him, and said he didn't know how much he could do. He kept the man at the hospital for a month, with the treatments every other day, which after an interval were increased. After the first few treatments that man's pain subsided. He needed less morphine to keep him comfortable. He was able to swallow, and he actually put on weight.

At the end of the month he felt so much better he decided to go home. He lived here in Dover, so he decided to come down here and go back to Wilmington for treatments twice a week. He did that for a time, and then Dr. McElfatrik increased the interval and he was getting his treatments about every two weeks, for four months. That man was able to go about and perform his duties. He had absolute comfort in swallowing. He slept without drugs, and he put on weight. Then suddenly his symptoms recurred; his pain came back, and his lesion recurred. We re-admitted him to the hospital. We put him through the same treatment he had before, and he lived about three weeks, when he died from hemorrhage. In that case, certainly, deep x-ray therapy was justified. It gave him four months of comfort. It gave him four months more of life, and I feel, as Dr. Tomlinson does, that Delaware is equipped for almost any type of treatment and care that you can

get almost anywhere else. They certainly have developed the deep x-ray therapy in Dr. McElfatrick to such a point that we can look to it as a safe measure, just as safe as you can get anywhere else in this country.

DR. GEORGE C. McELFATRICK: Dr. Allen asked a question as to the results of treatment of carcinoma of the thyroid. Since we have only had our machine three years, we have had but few cases of carcinoma of the thyroid. As to the results, it is too early to say whether or not a cure has been effected, but we do believe that these patients have all had the same relief that these men have testified to, and that Dr. White testified we had with his case of carcinoma of the larynx. We give the same treatment over this area, and our results in carcinoma of the thyroid have been encouraging, but whether the apparent cures will be permanent time alone will tell. Some of these patients have only been treated a year, and some six months, but we do feel that we will get as good results as with carcinoma of the larynx or pharynx.

Some men may say after hearing of Dr. Mayerberg's case, where the patient died four months after treatment: "what is the use of going to that trouble and expense when he is going to die anyhow?" But I think every single one of these patients wants to live, and they all want to live until the last minute, no matter how bad they are, so I think it is our duty to save these people and give them not only comfort but peace of mind. We have all seen—though perhaps in my department I may get more of it than you do, for it is the dumping ground of the last resort—how horrible it is to watch these sufferers. In humanity's sake you must try to do something for them, and if we can only give them relief for four months we will be doing something.

As to Dr. Ellis' case, that was a year ago, and the man is living today, though we know he is going to die eventually, but he has had one good year at least, and he has peace of mind, for he does not know what he has.

Since we treated Dr. Mayerberg's case we have improved our technique. In this case of Dr. White's we gave what we call the Coutard treatment, named after Dr. Coutard of Paris. It is a terribly drastic treatment, but we come

as near as we can to using that, and we have gotten excellent results by this technique, which means a filter of two millimeters of copper added to a machine running 200 kilowatts, with a 50 centimeter target. I didn't bring in the technique of my treatment, but I believe we have improved our technique, and that we are going to get better results.

I remember reading a paper here some time ago on the x-ray treatment of hyperthyroidism. At that time our equipment didn't even have the machines calibrated, and we gave a report of about 10 or 15 recoveries. One of those patients, a woman, came into my office only two weeks ago. I didn't recognize her, she looked so well. She has had children since that time, and has gotten fat, and was nice and sassy looking. She said she felt she had a recurrence in the throat again. We only gave her two treatments, and we found she was more nervous than anything else. Those are very glowing results.

I want to thank everybody for their kind words. As Dr. Tomlinson said, in the early days we had it a little bit hard when we were down in the laboratory trying to dissolve that bottle of carbolic acid crystals, and the water went dry and we had an explosion. (Laughter)

Dr. Allen wanted to know whether the heart muscle was affected. I am sorry I can't answer that. I have not read the literature on that phase to any extent, but maybe Dr. Gay can tell us whether metastasis from the thyroid affects the heart muscle.

DR. DOUGLAS M. GAY: Metastasis of carcinoma to the heart muscle is indeed quite rare, although we have encountered it several times here in Delaware, and I have seen it elsewhere. Mr. President, may I ask the privilege of the floor for Mrs. Freeman, who has just reviewed some of the literature on carcinoma of the thyroid?

MRS. MARION FREEMAN (Wilmington): All that I can add is that in reviewing the literature of carcinoma of the thyroid I ran across a series of 167 cases in which the author, whose name I do not remember, said that in 10 per cent of the cases considered primarily inoperable there had been cures with the use of x-ray therapy.

THE PATHOLOGY OF BLADDER TUMORS

DOUGLAS M. GAY, M. D.

Wilmington, Del.

The basis of this report is a group of 86 complete records of tumors of the urinary bladder on file with the Delaware Committee of the American Society for the Control of Cancer. These records, collected during the last two years, are unique because they contain a large proportion of very early tumors about which we have some knowledge of the etiological factor.

It is appropriate at the outset to review certain features of the anatomy of the urinary bladder. It is a sacular structure composed of an outer fibrous coat, partly peritoneum, a muscular coat of three incompletely differentiated layers of smooth muscle, and an inner mucous coat of transitional epithelium united to the muscularis by a loose layer of areolar tissue. The arteries supplying the bladder are mainly derived from the anterior trunk of the internal iliac, and the veins communicate with a plexus about the prostate which terminates in the internal iliac vein. The lymphatics are few in number and form two plexuses, one in the muscularis and another in the deep tissue of the mucosa. There are said to be no lymphatics in the superficial portion of the mucosa.

The tumors of the bladder may be derived from any type of tissue found in the normally developed bladder or from embryonal remnants of cloaca or urachus, but it is statistically reported by the Bladder Tumor Registry of the American Urological Association that of 921 registered tumors, 902 were of bladder epithelium.

In searching for general factors in the etiology of bladder tumors we have analyzed our 86 patients with regard to occupation and find that in addition to the 44 dyeworkers three others were in contact with synthetic pigments. As to sex, 12 of our series were females. No conclusion can be drawn from this figure, however, since the dyeworks from whom a large number of our cases are derived employs men only. The 902 registered cases of the American Urological Association contain 23% females.

Their figures also indicate that the peak age of bladder tumors is from 60 to 64. Our own small number among the civil group corresponds with this. The lower age group among the dyeworkers may be explained by the presumption that bladder tumors occur at any age among those exposed to the carcinogenic agent, the determining factor being the length of exposure.

As to the contributing factors the family history plays no significant part since the instance is probably no greater than that of a normal population. Prostatic hypertrophy was present in 21, but it must be remembered that this lesion is regularly very common in the age group studied. Diverticulum of the bladder is generally considered definitely predisposing. The same is true of the bladder anomalies. Although the older writers considered bladder stone as a predisposing factor there seems to be no evidence to support this. It is the opinion of the Washington registrars that calculi most frequently represent incrustations around masses of necrotic tumor. Our most valuable evidence as to the etiologic agent is found in our group of 44 dyeworkers, most of whom were in contact with betanaphthylamine. A few others were in contact with benzidine. There is evidence in the German literature that aniline is also carcinogenic.

Our conception of the natural history of bladder tumors is based upon routine cystoscopic examination of a large number of dyeworkers and a careful study of 44 of these who developed bladder tumors. The earliest perceptible change is a hyperemia or hemorrhage localized in the general region of the trigone. This is followed by the appearance of dilated blood vessels which on microscopic examination consist of dilated irregular vascular spaces with frequent thrombi. The overlying epithelium is at first normal, but eventually is pushed up in the form of papillary projections of connective tissue and blood vessels covered by essentially normal transitional epithelium. The carcinogenic agent is apparently absorbed by the respiratory tract and reaches the bladder by the way of the blood stream. Another change preceding tumor is the so-called cystitis cysticum. It is

not known why the only evident pathology is confined to the bladder. The lesion of cystitis cysticum is likewise followed by papillary outgrowths of the mucosa. Such delicate papillary masses are easily eroded and give rise to the symptom of hematuria. The epithelial changes start in the basal layer about the blood vessels. The frequent multiplicity of these lesions indicates that the entire bladder is involved. The epithelial changes progress to the superficial layer where the lesion may be benign or malignant. At any stage of the process the lesion may be stationary or progress to a more malignant lesion. There is no evidence that portions of bladder tumor become implanted on other parts of the bladder or in operative wounds. This is substantiated by the large series of cases registered in Washington. The subsequent growth of the tumor results in death through obstruction or infection of the urinary organs, and is often complicated by serious respiratory infections. Metastases are uncommon, but when they do occur the bones, lungs, regional lymph nodes, and liver are involved with a frequency corresponding to the order mentioned. Statistics regarding survival of the patients with bladder tumor indicate a better prognosis in the dye tumor group than in civil cases. It is to be remembered, however, that the dye tumors occur in an earlier age group than the civil cases.

The outstanding initial symptom is hematuria. It was noted in 39 of 57 patients. There is no other significant symptom of early bladder tumor. To state this in other words, hematuria warrants a strong suspicion of bladder tumor. Debenham states that when hematuria occurs as the initial symptom in a male there is a 50% chance that it is due to bladder tumor. When a bladder tumor is suspected the first diagnostic step is cystoscopic examination. A competent urologist can determine accurately the size, the location, and the number of tumors present. The next step to be taken in all but sessile tumors is a biopsy. This may be done through the cystoscope, preferable by means of a small cup-shaped cutting rongeur. Specimens as small as one millimeter in diameter taken by means of a Bransford-Lewis rongeur give an accurate

picture of the type of tumor and the degree of malignancy. Specimens removed by means of the electric cutting loop are not as satisfactory because the heat generated tends to cook minute tumors beyond recognition. This apparatus may also be too dangerous for use on the ureteral meati where many of the tumors occur. Tissue adherent to a coagulating electrode are usually unsatisfactory.

The subject of treatment of bladder tumor is not within the scope of this report, and we have not followed our cases for a sufficiently long time to draw conclusions.

For purposes of standardizing the gross description we have arbitrarily divided the bladder into six areas. The table before you shows the distribution of 43 single bladder tumors as we have found them in these six areas. It is to be noted that most of the tumors occur at the base of the bladder, usually around one of the meati. It will be recalled that the veins of the bladder are most numerous in this region. This record of the distribution varies somewhat from that of the American Urological Association, but is to be explained by personal differences in locating tumors which surround the ureteral openings. In analyzing our series with regard to number and diagnosis of the tumors we conclude that a single tumor is more apt to be benign and a multiple tumor more apt to be malignant. The tumors appear in several formations. They may be papillary with delicate fronds extending above the mucosal surface, or they may be coarse with blunt papillary projections, or as compact masses with a warty appearance. Other tumors are sessile and have more the appearance of localized indurations. They may or may not be necrotic. We frequently find prominent blood vessels radiating from the base of the tumor.

For purposes of standardizing the microscopic description we have arbitrarily divided bladder tumors in four grades: I represents benign papilloma and IV represents the most malignant—cancer. Our series contains a large percentage of grade I tumor, but it is to be recalled that we are including a large number of very early lesions. In three instances we have found a coexistence of tumors of different grades and in one instance there was an

adenocarcinoma derived from remnants of the urachus.

The concluding slides represent the microscopic pathology of typical cases:

The first patient is a male, age 44 years, who was employed in a dyeworks 7 years. He presented no symptoms or history of urinary difficulty. On routine examination a single papillary tumor .5 cm. in diameter was discovered on the left lateral wall near its junction with the posterior wall. The biopsy specimen shows a papilloma, grade I. This was treated by transurethral electrocoagulation, and the patient has remained free of symptoms for six months following the last treatment.

The second patient is a male, age 51 years, who was employed in the dyeworks for 13 years. His first symptom was pain and burning on voiding. This was followed in two months by hematuria. Cystoscopic examination showed multiple papillary tumors on the right lateral, anterior and posterior walls. Biopsy showed a papillary carcinoma, grade II. He was treated by the implantation of radon seeds through a cystotomy incision, and has remained free of tumor approximately one year since.

The third patient was a male, 38 years old, and a dyeworker for 9 years before he developed an intermittent hematuria as the initial symptom. Cystoscopic examination showed multiple papillary tumors around the ureteral meati. Biopsy specimen showed a carcinoma, grade III. He was treated by the implantation of radon seeds through a cystotomy incision, and he died four months later of urinary infections.

The fourth patient was 39 years old, and employed fourteen years as a dyeworker before he developed hematuria. Cystoscopic examination showed multiple papillary infiltrating tumors around the bladder orifice. Biopsy specimen showed a rapidly growing carcinoma, grade IV. He was treated by two open operations with implantation of radon seeds and by high voltage x-ray. He died 9 months later of urinary infection, complicated by pneumonia.

The fifth case is a dyeworker, age 44 years, who was employed 13 years before the devel-

opment of hematuria and burning. Cystoscopic examination revealed a single papillary tumor on the left lateral wall. The biopsy specimen shows a combination of a grade III carcinoma extending into the centers of a papillary mass. The second biopsy shows marked cystitis cysticum with the presence of numerous dilated vessels in the underlying tissue.

SUMMARY:

1. 86 cases of bladder tumors collected by the Delaware Committee of the American Society for the Control of Cancer are briefly reported.

2. 44 patients—28 without any clinical symptoms whatever—represent a series of bladder tumors of known etiology.

3. The outstanding initial symptom is hematuria.

4. Biopsy specimens removed by a Bransford-Lewis rongeur reflect in miniature a picture of the tumor, on the basis of which the prognosis and subsequent treatment can be determined.

CONCLUSIONS:

A theory of the natural history of tumors of the urinary bladder has resulted from the routine cystoscopic examination of a large group of men exposed to a known carcinogenic agent:

1. The earliest demonstrable lesion is a vascular change probably involving the mucosa of the entire bladder but observed more frequently in the region of the trigone, where the veins are most numerous.

2. Subsequently the epithelium proliferates first in the basal layer and later in the superficial layer, with the formation of papillary or sessile tumors.

DR. GEORGE C. McELPATRICK (Wilmington): I would like to ask Dr. Gay how he makes his diagnosis of the difference between aniline tumors and those of other etiology.

Another remarkable thing: I have seen three or four cases, and, as he said, the patients were most of them young, and the treatment seemed to consist of radon seeds and high voltage therapy, but the results didn't seem to be very good. I wonder why there were the sudden deaths he spoke of. Should they have had more treatment?

DR. ROBERT W. TOMLINSON (Wilmington):

This thing is particularly interesting to me, and I am very glad Dr. Gay brought it out in his paper because I had the privilege of seeing Dr. Anderson demonstrate a case in the ward at the Wilmington General Hospital, which emanated from such irritative factor. As I remember it, at that time he said that therapeutically it was far better to have a transurethral implantation of radon seeds than it was to have the same application through a suprapubic open operation; that it was far more efficacious and productive of a less frequent lethal termination, but he was not able at that time to clarify the reason for the better results that accrued from the transurethral method of approach.

Another thing which has been a little bit puzzling to me is to determine actually what is the avenue of toxic approach, whether it is a respiratory route, and if the epithelium is the only focus or point which is susceptible to the toxic manifestations of the chemical irritant, and the time incidence between the occurrence of the first absorption of the drug and its pathological manifestation; and why if there is any causative factor present, the bladder and side have especial affection and there is an immunity in the respiratory and upper renal system?

DR. BRUCE S. VALLETT (Wilmington): I would like to cite a case which I saw about a month ago in a young woman. Prior to this visit I had seen her a year before when she complained of some dysuria, and on cystoscopic examination the only thing that I could see was an overgrowth of epithelium; in other words, there were a very few little epithelial filaments protruding around the neck of the bladder; everything else was negative. She was dilated and given some topical applications of silver nitrate, and the condition cleared up for a while; but now it has recurred, and on this second cystoscopy she has developed a lesion that we speak of as leukoplakia. It is a white patch in the bladder. We know that lesions of leukoplakia are forerunners very often of carcinoma of the bladder. I just bring this out to say that we must not expect or always look for hematuria as a first symptom. We have to look further ahead than

that. We must suspect any bladder condition of dysuria in terms of tumor so that we will become better able to anticipate these lesions early.

DR. GAY: I am very glad that Dr. McElfatrick asked a question as to the differentiation of aniline tumors, so-called, from those occurring in civil life, because I did not bring out that point in my paper. There is apparently no difference whatever between them from an anatomical-microscopic standpoint, or from the course when once started.

Regarding your question as to why these two patients died so soon after the operation, they died as a result of urinary infection perhaps due to the combination treatment. It was open cystoscopy as well as irradiation. Three of the forty-four we had have died.

DR. McELPATRICK: Your others are all living?

DR. GAY: Yes.

With regard to Dr. Tomlinson's remark about the therapy, I am unable to speak with regard to therapy, but it would seem apparent that in treating a sizable tumor it would be practically impossible to plant sufficient radon seeds through the cystoscope. Therefore, in such an instance one would have to resort to an open operation.

THE THERAPEUTICS OF TIN

EDWARD PODOLSKY, M. D.

Brooklyn, N. Y.

Tin is among the substances which of late years has attracted notice from pharmacologists and clinicians as an interesting possibility in the treatment of certain types of disease. Its beneficial effects on the human body were discovered in quite an accidental way, as has been the case with quite a few medicinal substances now in common use. It was noted, many years ago, that workers in factories where tin was used were free from pyogenic skin affections, particularly those in which the staphylococcus was the causative agent, while other persons in similar circumstances of life, but not in daily contact with tin, were afflicted with pyodermic lesions. This casual observation led to further study, and it was noted, by Gregoire and Frouin in

particular, that tin had the property of inhibiting the growth of staphylococci in vitro.

It was not long before powdered tin began to be employed in France as an empirical remedy. The tin workers of Beauce, southwest of Paris, were great users of powdered tin, and they evidently benefited from its use. Gregoire and Frouin were perhaps the first to undertake the study of tin pharmacotherapeutics in earnest. They found that tin and tin oxide strongly inhibited the growth of staphylococci under ordinary anaerobic conditions. However, under aerobic conditions tin and tin oxide did not hinder the growth of staphylococci, but their virulence was definitely diminished.

Animal experimentation on rabbits brought to light some rather interesting facts. Rabbits experimentally infected with staphylococci under tin treatment lived from four to eight days longer than the controls. Similarly good results were obtained on dogs. Pateuko gave dogs, in a series of experiments, 0.2 gm. of tin daily for six weeks without observing any untoward effects.

Further research in connection with the bacteriocidal activity of tin and its compounds showed that the protochloride, iodide, oxide or metallic tin added to bouillon diminished the abundance of anaerobic cultures.

Tin therapy has been employed most extensively and for the greatest length of time in the treatment of diseases of the skin, particularly in cases of furunculosis, abscesses, and other staphylococcal affections. Frouin and Gregoire treated fifty cases of furunculosis with tin per ps, 0.5 to 1 gm. of metallic tin or tin oxide. In all cases the furuncles disappeared in from five to fourteen days. Hudelo repeated the technique of Frouin and Gregoire with good results in ten patients with furunculosis. Compton, in England, also obtained satisfactory results with tin in this type of skin infection. Rabut and Poliakoff also reported favorable results. In America, Norrie and McAuliffe have found ionization with tin of distinct benefit in furunculosis.

Hordeolum and suppurative wounds have been found to react favorably under the influence of tin therapy. Levy used tin in forty cases of stytes, with brilliant results.

The medicament was given in tablet form per os two or three times a day, each dose amounting to 0.22 to 0.44 gm. The treatment was begun as soon as the eyelid showed signs of redness and swelling. In a large number alleviation was complete in two to three days. In further advanced cases, the styte almost always dried up without reaching perforation. Marcel Perel also obtained satisfactory results with tin treatment in stytes.

Hudelo, Montlaur and Drouin in a series of skin diseases used tin with satisfactory outcome. Syecosis, pyodermitis, hydroadenitis and acne yielded nicely. Frouin and Gregoire also obtained good results in acne, and Compton found that acne and infective dermatitis yielded to tin therapy.

Frouin and Gregoire, who seem to have done more work with tin than anyone else, found that tin therapy was productive of good results in cases of bone suppuration, traumatic osteomyelitis, and suppurative battle wounds. Compton found that intensive tin therapy was of value in tuberculous bronchopneumonia and in pulmonary tuberculosis, sometimes being able to prevent the usual secondary infection and concomitant fever.

Chome and Frouin have used tin both locally and by mouth for lymphangitis in nursing women, with satisfactory results. J. E. Klein treated a series of chronic recurrent osteomyelitis with tin and found that tin oxide and metallic tin exerted a marked curative effect on chronic osteomyelitis with persistent sinuses and suppuration.

Bruhl has used intramuscular injections of colloidal tin in the treatment of tuberculosis and axillary abscesses, with good results. Sabrazes and Piechaud found that colloidal tin was of definite value as an adjuvant in the treatment of a case of meningitis. They injected the tin preparation intraspinaly. Repeated injections of tin conjointly with vaccinothrapy was responsible for the disappearance of the staphylococci from the spinal fluid. G. B. McAuliffe, following the analogy of ionization of zinc sulphate in the treatment of purulent otitis media, tried ionization with a mixture of tin oxide and metallic tin, with satisfactory results.

(Continued on Page 59)

EDITORIAL

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W. EDWIN BIRD, M. D. EDITOR
Du Pont Building, Wilmington, Del.
WILLIAM H. SPEER, M. D. Associate Editor
917 Washington St., Wilmington, Del.
M. A. TARUMIANZ, M. D. Associate Editor & Bus. Mgr
Du Pont Building, Wilmington, Del.
Telephone, Wilmington, 4368

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ALYCE JANE

Drama — emotion — hysteria — surgery — sensationalism — ethics — all summed up in the name Alyce Jane: just another case of diaphragmatic hernia, but so publicized that every man, woman and child in the nation breathes free, now that the unwitting star of the drama is on the road to recovery. A surgeon on the high seas; a radiogram; a little girl rushed halfway across the continent; a hospital all agog with anticipation; an operating room filled with spectators; a greying surgeon deftly at work; a mother filled with anxiety and hope; a small white bed with a childish patient, making the grade! Sure, it's drama, and how the great American public does love its drama. But is such high-pressure publicity — columns and columns of it — good for the medical profession?

We take the viewpoint that it is not. In the first place it hurts the individual doctor publicized. These stories are seldom accurate since they rarely emanate from the attending physi-

cian. The regular medical man is bound by an ancient and honorable code of ethics which prohibits his "furnishing or inspiring newspaper or magazine comments concerning cases in which the physician has been or is concerned. All other like self-laudations defy the traditions and lower the tone of any profession, and so are intolerable." We do not accuse the surgeon in this case of conniving at all his fanfare in the public prints: on the contrary, his whole record and reputation is so clean that this unwanted publicity must be particularly embarrassing to him, and we doubt not he has made earnest efforts to soft-pedal the whole thing. Yet the fact remains that his photograph (many years old) has been published far and wide, and his name is now an American by-word. In the jaundiced eyes of some physicians, he could and should have, early, put an end to bulletins and other information, and in the eyes of these physicians he has been hurt. How unfair this is, for the whirlwind began when he was still on vacation, and it has been our observation that once the press begins to whoop it up, nothing can stop the whoopee till the sensation has burned itself out.

In the second place, this variety of sensationalism hurts the surgeons at large. In the future, cases of this disease may have a tendency to gravitate towards this clinic, now so well known, passing by other clinics in other cities near to home or actually at home, where can be found other surgeons perfectly competent to operate successfully for this condition. No one clinic or clinician has a monopoly on knowledge, judgment or skill, or claims to have. To say nothing of added expense and inconvenience, such a gravitation would discount the reputation and ability of other able surgeons; in effect, this publicity, even though unintended, would then amount to unfair competition.

Third, this type of publicity hurts the medical fraternity at large. The public rightly expects a learned profession to conduct its affairs with modesty and dignity, and above all, in the case of medicine, with privacy. This same public will give scant thought to the fact that usually such campaigns originate with

the laity—the patient's family or friends—who may welcome the opportunity to strut in the limelight or bask in the reflected glory of some famous professional. Yet a certain percentage of this same public will feel that the learned profession of medicine has participated in a ballyhoo, and thereby has lost caste.

On the other hand, efforts to thwart legitimate publicity may be carried to an extreme. On the very day that the above-mentioned case was operated on, a similar operation was successfully performed in a small town in another state. In this case the surgeon swore the patient, the family, the hospital personnel, and everybody in contact to absolute secrecy; there were no spectators in the operating room; there was no prior publicity; and he admitted later to a gimlet-eyed reporter that he had performed the operation only upon the pledge of said reporter not to divulge his name. We have no idea why he went to such unusual precautions, unless he felt a certain disgust with the previous fanfare and decided there would be none of it at his expense: at any rate, his name was withheld, yet we can see no impropriety in naming the surgeon and then dropping the matter. In an effort to observe not merely the letter but the veritable spirit of medical ethics this particular surgeon has leaned over backwards in his modesty and meticulousness; we believe he has erroneously deprived himself of a measure of credit that is justly his. This is the other extreme.

As a matter of fact, there is a common sense ground midway between garrulity and taciturnity which any professional man of poise and experience should readily find, and adhere to. This ground keeps in view the essence of ethics on the one hand, and on the other hand recognizes the right of the public to legitimate news. Unusual patients, unusual diseases, or unusual therapeutics are matters of public interest that can be reported modestly and briefly in the lay press without lauding or exploiting any physician, and newspaper editors are evincing a better understanding of the physician's position in such reports. It would be better, of course, if all such items were released through the Public Relations

Committee of the County Medical Society to which the physician belongs, but till now this has not always been feasible. When the absolutely unique happens, as in the Dionne quintuplets, nothing could or should interfere with the widest kind of publicity, in which case the poor doctor is the unhappy victim of circumstances, who simply has to stand up and "take it." But the merely unusual item should be handled with some sense of proportion, and the publicity should not subject the physician to criticism from the profession or the public. Let us take our public more into our confidence; let us inform them, through proper channels, more and more of the triumphs of modern medicine—that is the only way to defeat the blatant quacks and cults; but at the same time let us find that common sense middle ground; then there will not be another Alyce Jane.

The tricks of commerce are many and various, and the manufacturer of proprietary pharmaceuticals is usually pretty good at commerce. One of them seems to go on the policy: we make the stuff, now you tell us what it's good for. We chuckled as we read this recent circular letter.

Dear Doctor:

In my original laboratory work which resulted in the development of I had a definite therapeutic field in mind.

Now that the product has been in the hands of the physicians for several months, I am receiving many very pleasing reports from doctors who have found it of unusual value in a wide range of conditions. These letters testify to the usefulness of in skin conditions which were not included in the original list of indications.

Would you be kind enough to help me by just scribbling at the bottom of this letter the conditions in which you find most beneficial. You understand that this will not be used for advertising purposes and your name need not be signed.

I would simply like to have this information to give me a background for my laboratory work.

Dr. Franklin H. Martin, one of the notable figures of American medical journalism, died on March 7, 1935 at Phoenix, Arizona, aged 77. Dr. Martin was born at Ixonia, Wisconsin, on July 13, 1857, and was graduated in medicine from Northwestern University in 1880. He began his practice in Chicago in 1881. In 1886 he married Miss Isabelle Hollister.

daughter of one of Chicago's leading physicians. In 1888 he was one of the founders of the Post-Graduate Medical School, the first graduate school in Chicago. Dr. Martin's professional interests centered in gynecology, in which field he did notable research, especially in ovarian transplantation.

In 1905 Dr. Martin founded *Surgery, Gynecology and Obstetrics*, probably the greatest journal of its kind in the world, and of which he has been the one and only editor. In 1910 he organized the Clinical Congress of Surgeons of North America, out of which, in 1913, there was evolved the American College of Surgeons, of which he has been the active directing head ever since, and its president in 1928-29. At the time of his death he was also the chairman of the board of the Gorgas Memorial Institute of Tropical and Preventive Medicine, at Panama, which he helped to found in 1921.

During the World War Dr. Martin served on the General Medical Board of the United States Army, and received the Distinguished Service Medal.

He is survived by his widow and daughter. The funeral services were held on March 12th, in the Murphy Memorial Hall of the American College of Surgeons. Interment was in Chicago.

DELAWARE ACADEMY OF MEDICINE Reference Work of the Library

In its broadest sense reference work covers everything necessary to help the reader or investigator in his inquiries. One question may be answered by consulting a single reference book, another by using a group of reference books on an individual subject and allied subjects, while many inquiries entail a considerable amount of actual research work.

Whatever the size and kind of library, many questions can be only partly answered by the formal reference books in its collection, but there are many profitable sources of information outside of the library. Much valuable help may also be obtained through telephone reference work, inter-library loans, institutions, learned societies, and government bureaus.

Besides dictionaries and encyclopedias, our

library is equipped with some of the most useful tools for reference work in a medical and dental library: the Quarterly Cumulative Index Medicus, the Index Catalogue of the Library of the Surgeon-General's Office, and the Index of Periodical Dental Literature.

The Quarterly Cumulative Index Medicus, published by the American Medical Association, merged two former indexes to current medical literature and provides in a simple arrangement the easy use of the most complete index available to recent periodical medical literature of the world. Our library has the most recent volumes of this index and the gaps in the earlier volumes are being filled as rapidly as possible.

The Library of the Surgeon-General's Office, now known as the Army Medical Library and maintained by the Government, is the largest medical library in the country, and its Index Catalogue, published in three series (forty-seven volumes in all), contains the most important items of value to medical science, such as books, pamphlets and periodical articles, from the earliest times down to the publication of the last volume in 1932. Our library has the third series and a part of the second, as it was thought best to obtain first the series covering the most recent material.

The Index of Periodical Dental Literature was compiled by Arthur D. Black and published by the Dental Index Bureau. It is an index to dental literature published in the English language and extends over the period from 1839, when the first dental journal was published, to 1929. Our library has the complete set.

No study or research can be carried on without recourse to some of the periodicals which hold the key to previous work that may have been done along the same lines or that can give the latest developments in a new field, and the usefulness of a library depends to a very large extent upon its periodical holdings. Our library now receives 115 American and foreign periodicals devoted to medicine, surgery, dentistry, and allied subjects. Some are complete, and the gaps are being filled in the others as the opportunity occurs.

20081

In our reference work, if the publications required are not in the library they are borrowed on inter-library loan from other libraries. Through this privilege of inter-library loans it is possible to secure within a few days the desired volume, the transportation charges being paid by the borrower, and in cases where the publication cannot be lent photostat copies may be obtained of the items desired.

Among other useful reference material to be found in the library are the following American periodicals which carry abstracts in English: American Journal of Cancer, International Abstract of Surgery, International Medical Digest, International Surgical Digest, Journal of the American Medical Association, and Journal of Industrial Hygiene and Abstract of the Literature.

Foreign periodicals, with abstracts in English are: Journal of the Philippine Islands Medical Association, and Memorias do Instituto Oswaldo Cruz, of Rio de Janeiro, Brazil.

MISCELLANEOUS

A. M. A. Adopts Policies on Sickness Care

The special session of the House of Delegates called at the request of the Board of Trustees met in Chicago, February 15 and 16. As will be apparent from the minutes of the House, to be published in THE JOURNAL next week, the session opened with a statement by the Board of Trustees, giving the record of the Association in relationship to this subject and propounding to the House of Delegates six questions of moment. After much general discussion, the speaker of the House of Delegates referred the entire discussion on these six questions to a reference committee, which then brought in a report to the House. This report was unanimously adopted by the House after suitable correction and amendment. It is important that every member of the American Medical Association read carefully this statement of policies and support it to the utmost with his patients and with representatives in state legislatures and in the Federal Government. The report of the reference committee opens with a preamble stating in general the point of view of the American Medical Association and its right to speak for the medical profession on this subject:

The American Medical Association, embracing in its membership some 100,000 of the physicians of the United States, is by far the largest medical organization in this country. The House of Delegates would point out that the American Medical Association is the only medical organization open to all reputable physicians and established on truly democratic principles, and that this House of Delegates, as constituted, is the only body truly representative of the medical profession.

The House of Delegates commends the Board of Trustees and the officers of the Association for their efforts in presenting correctly, maintaining and promoting the policies and principles heretofore established by this body.

The primary considerations of the physicians constituting the American Medical Association are the welfare of the people, the preservation of their health and their care in sickness, the advancement of medical science, the improvement of medical care, and the provision of adequate medical service to all the people. These physicians are the only body in the United States qualified by experience and training to guide and suitably control plans for the provision of medical care. The fact that the quality of medical service to the people of the United States today is better than that of any other country in the world is evidence of the extent to which the American medical profession has fulfilled its obligations.

The first question propounded by the Board of Trustees to the House of Delegates was "Shall or shall not the American Medical Association reaffirm its opposition to compulsory sickness insurance?" The House of Delegates replied to this question in no uncertain terms. It said:

The House of Delegates of the American Medical Association reaffirms its opposition to all forms of compulsory sickness insurance whether administered by the Federal Government, the governments of the individual states or any individual industry, community or similar body. It reaffirms also its encouragement to local medical organizations to establish plans for the provision of adequate medical service for all the people, adjusted to present economic conditions, by voluntary budgeting to meet the costs of illness.

The medical profession has given of its utmost to the American people, not only in this but in every previous emergency. It has never required compulsion but has always volunteered its service in anticipation of their need.

The second question propounded was based on the fact that the Committee on Economic Security, appointed by President Roosevelt, in its report to Congress on January 17 had stated tentatively eleven principles which it believes fundamental to its plan of compulsory health insurance and which apparently would form the basis of the further report on this subject to be a part of the message sent to Congress by the President on March 1:

The Committee on Economic Security, appointed by the President of the United States, presented in a preliminary report to Congress on January 17 eleven principles which that committee considered fundamental to a proposed plan of compulsory health insurance. The House of Delegates is glad to recognize that some of the fundamental considerations for an adequate, reliable and safe medical service established by the medical profession through years of experience in medical practice are found by the committee to be essential to its own plans.

However, so many inconsistencies and incompatibilities are apparent in the report of the President's Committee on Economic Security thus far presented that many more facts and details are necessary for a proper consideration.

The Wagner bill for economic security has been discussed in previous issues of THE JOURNAL. It is an act which provides for unemployment insurance and old age pensions. It also provides Federal subsidies to the individual states and additional funds for maternal and child welfare, for the care of the crippled and for the United States Public Health Service. In making the bill effective, it provides for setting up a social insurance board in the Department of Labor. The House of Delegates of the American Medical Association recognized that its primary concern must be with those aspects of the measure concerned in the field of medicine and the public health. It recognized, however, that the original drafts of the Wagner bill indicated that sickness insurance also would be placed under the social service board already mentioned. Therefore the House of Delegates said:

The House of Delegates recognizes the necessity under conditions of emergency for Federal aid in meeting basic needs of the indigent; it deprecates, however, any provision whereby Federal subsidies for medical services are administered and controlled by a lay bureau. While the desirability of adequate medical service for crippled children and for the preservation of child and maternal health is beyond question, the House of Delegates deplores and protests those sections of the Wagner bill which place in the Children's Bureau of the Department of Labor the responsibility for the administration of funds for these purposes.

The House of Delegates condemns as pernicious that section of the Wagner bill which creates a social insurance board without specification of the character of its personnel to administer functions essentially medical in character and demanding technical knowledge not available to those without medical training.

Recognizing the fact that the individual states are immediately concerned with the bill for sickness insurance now being proposed by the American Association for Social Security, the House of Delegates voiced its

strong condemnation of this measure. In a brief statement THE JOURNAL called attention a few weeks ago to many of the features of this legislation which place it utterly beyond any kind of consideration from a medical point of view. The House of Delegates said:

The so-called Epstein bill, proposed by the American Association for Social Security, now being promoted with propaganda in the individual states, is a vicious, deceptive, dangerous and demoralizing measure. An analysis of this proposed law has been published by the American Medical Association. It introduces such hazardous principles as multiple taxation, inordinate costs, extravagant administration and an inevitable trend toward social and financial bankruptcy.

Throughout the country there seems to be some demand for presentation by the American Medical Association of a plan whereby county medical societies and the medical profession generally may be able to arrange with the public for a better distribution of medical service. More than ten years ago the House of Delegates recognized the desirability of such plans and authorized county medical societies, with the approval of state medical organizations, to put into effect various schemes for enabling the public, particularly in the lower income levels, to obtain adequate medical service at costs that were within their means. At the special meeting of the House of Delegates, several of these plans were brought specifically to the attention of those present. The reference committee gave careful consideration to all these plans and also to an account of some 150 plans already in operation which have been analyzed by the Bureau of Medical Economics. After this consideration, the reference committee reported:

The committee has studied this matter from a broad standpoint, considering many plans submitted by the Bureau of Medical Economics as well as those conveyed in resolutions from the floor of the House of Delegates. It reiterates the fact that there is no model plan which is a cure-all for the social ills any more than there is a panacea for the physical ills that affect mankind. There are now more than 150 plans for medical service undergoing study and trial in various communities in the United States. Your Bureau of Medical Economics has studied these plans and is now ready and willing to advise medical societies in the creation and operation of such plans. The plans developed by the Bureau of Medical Economics will serve the people of the community in the prevention of disease, the maintenance of health and with curative care in illness. They must at the same time meet apparent economic factors and protect the public welfare by safeguarding to the medical pro-

fession the functions of control of medical standards and the continued advancement of medical education requirements. They must not destroy that initiative which is vital to the highest type of medical service.

In the establishment of all such plans, county medical societies must be guided by the ten fundamental principles adopted by this House of Delegates at the annual session in June, 1934. The House of Delegates would again emphasize particularly the necessity for separate provision for hospital facilities and the physician's services. Payment for medical service, whether by prepayment plans, instalment purchase or so-called voluntary hospital insurance plans, must hold, as absolutely distinct, remuneration for hospital care on the one hand and the individual, personal, scientific ministrations of the physician on the other.

Your reference committee suggests that the Board of Trustees request the Bureau of Medical Economics to study further the plans now existing and such as may develop, with special reference to the way in which they meet the needs of their communities, to the costs of operation, to the quality of service rendered, the effects of such service on the medical profession, the applicability to rural, village, urban and industrial population, and to develop for presentation at the meeting of the American Medical Association in June model skeleton plans adapted to the needs of populations of various types.

The importance of this special session of the House of Delegates cannot be overemphasized. It represents clearly the point of view of the medical profession as announced through its delegates elected on a truly democratic principle. Physicians who wish to preserve to the medical profession the right to say how medicine shall be practiced, their initiative in diagnosis, treatment and investigation of disease, and the intimate personal relationship that must exist between doctor and patient for the best results, will place behind these policies all the individual support they are able to muster.—*Jour. A. M. A.*, February 23, 1935.

For Socialized Medicine

Special to The New York Times

Philadelphia, March 6.—A Pennsylvania League for Socialized Medicine, with a first membership of about 100 Philadelphia physicians, has been organized here.

Its temporary president is Dr. C. Dudley Saul, Professor of Clinical Medicine at Hahnemann Medical College, who said that the league was patterned after a similar body in New York and that it was planned to form one in each State.

Although the league advocates the payment

by the State of medical fees on a graduated scale, Dr. Saul said it was "not communistic and not particularly socialistic," since it would be regulated by the medical profession and allied groups.

He asserted that illness was a "social responsibility" and contended that "all that science has to offer" in the way of medical treatment was denied the vast body of citizens whose financial status lay between wealth and pauperism.

Sectional Meeting, A C S.

The District of Columbia-Maryland-Delaware-Virginia-West Virginia sectional meeting of the American College of Surgeons will be held in Washington, D. C., on Thursday and Friday, April 11 and 12 next. Headquarters will be at the Mayflower Hotel.

An active Committee on Local Arrangements, with Dr. Ralph M. LeComte as Chairman, and Dr. Elijah W. Titus as Secretary, has plans well in hand for an excellent meeting.

Following is a preliminary outline of the entire program:

Thursday, April 11, 1935:

8:00- 9:00—Registration.

9:00-12:00—Operative Clinics.

9:30-12:00—Hospital Conference.

12:30- 2:00—Medical Motion Pictures.

2:30- 5:00—Hospital Conference.

5:00- 5:30—Annual Meeting, Fellows of the College.

7:00- 8:00—Medical Motion Pictures.

8:00-10:30—Scientific Session, General Surgery.

8:00-10:30—Scientific Session, Eye, Ear, Nose and Throat Surgery.

8:00-10:30—Hospital Round Table Conference.

Friday, April 12, 1935:

9:00-12:00—Operative Clinics.

9:00-11:00—Cancer Clinic.

9:30-12:00—Hospital Conference.

12:30- 2:00—Medical Motion Pictures.

2:30- 5:30—Scientific Session, General Surgery.

2:30- 5:30—Scientific Session, Eye, Ear, Nose and Throat Surgery.

2:30- 5:00—Hospital Conference.

8:00-10:00—Community Health Meeting.

Some of the distinguished visitors who will be present on this occasion are: Dr. Franklin H. Martin, Chicago, Director General, American College of Surgeons; Dr. Alfred W. Adson, Rochester, Chief Neurosurgeon at Mayo Clinic; Dr. Frederic W. Baneroff, New York City, Associate Professor of Clinical Surgery, Columbia University College of Physicians and Surgeons; Dr. George Crile, Cleveland, Director, Cleveland Clinic Foundation, and Chairman, Board of Regents, American College of Surgeons; Dr. Claude F. Dixon, Rochester, Assistant Professor of Surgery, Mayo Foundation, University of Minnesota Medical School; Dr. Robert B. Greenough, Boston, President, American College of Surgeons; Dr. LeRoy Long, Oklahoma City, Director, LeRoy Long Clinic; Dr. John O. McReynolds, Dallas, Ophthalmic and Aural Surgeon, St. Paul's, Parkland, and Methodist Hospitals, Scottish Rite Hospital for Crippled Children; Dr. Fred W. Rankin, Lexington, Surgeon, St. Joseph's and Good Samaritan Hospitals; Dr. Charles L. Seudder, Boston, Consulting Surgeon, Massachusetts General Hospital; Dr. Frederic A. Besley, Waukegan, Professor of Surgery, Northwestern University Medical School; Dr. Malcolm T. MacEachern, Chicago, Associate Director, American College of Surgeons, and Director of Hospital Activities; Robert Jolly, Houston, Superintendent, Memorial Hospital, and President, American Hospital Association; and Dr. M. N. Newquist, Chicago, Department of Industrial Medicine and Traumatic Surgery, American College of Surgeons.

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The Therapeutics of Tin

(Continued from Page 52)

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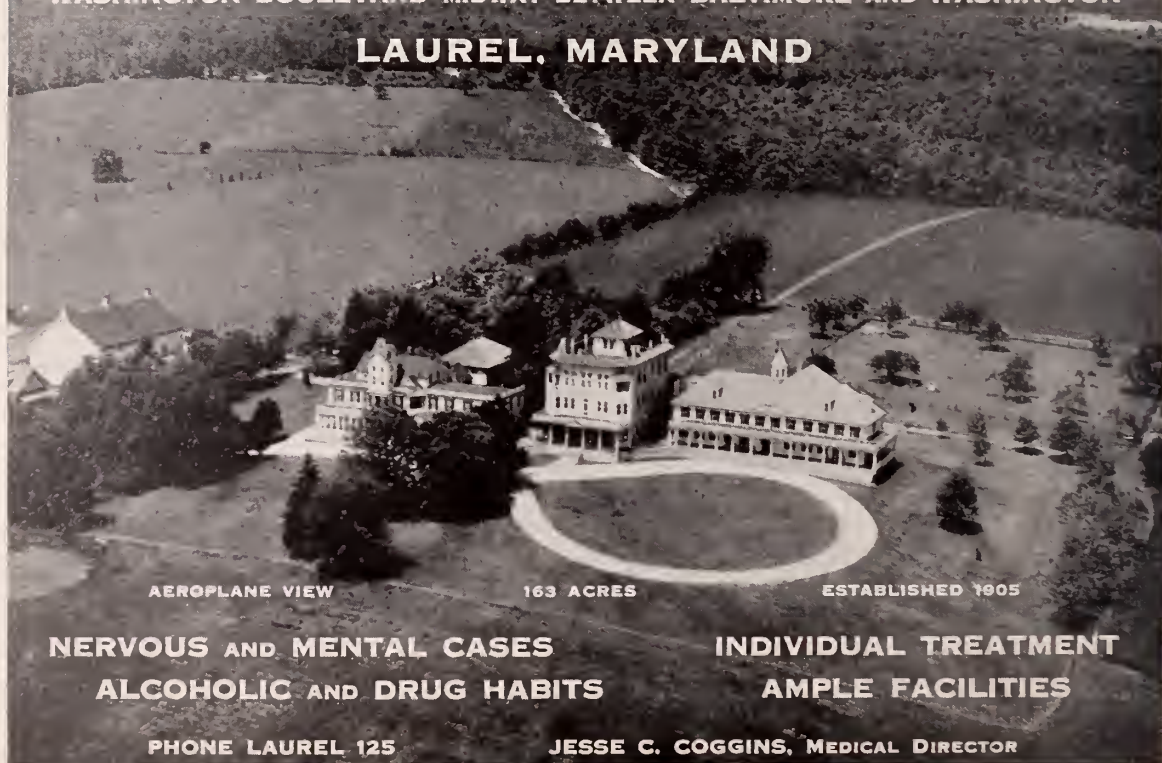
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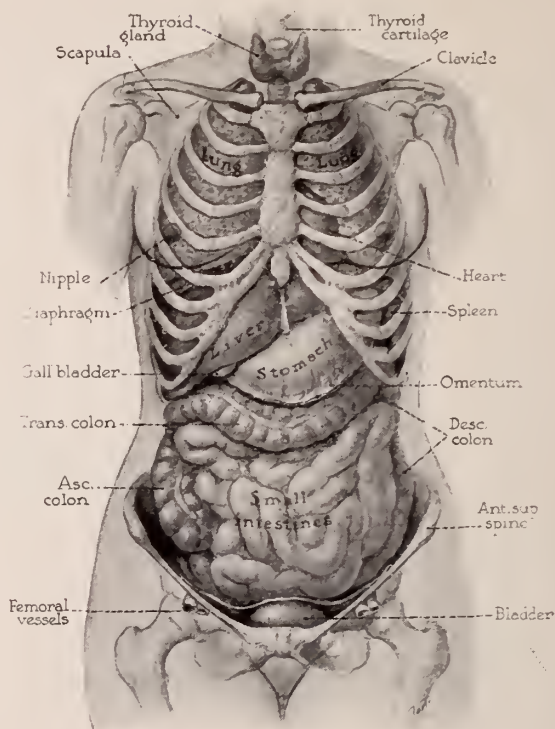
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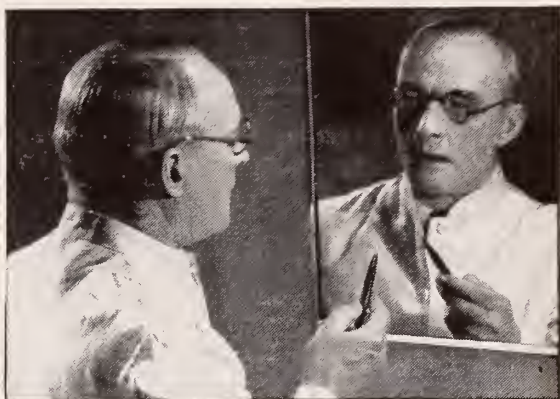
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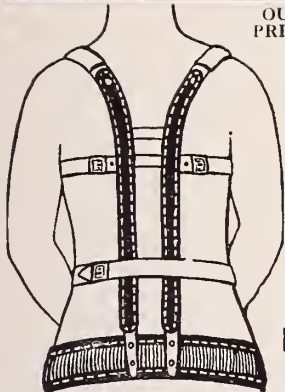
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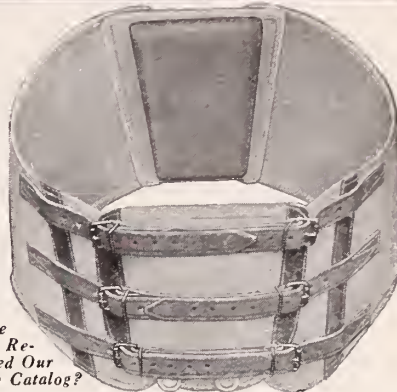
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Faecality? **FACULTY BODY MECHANICS— A FACTOR FOR CAUSING DIAGNOSTIC ERRORS***

WILLIAM BATES, M. D.,
Philadelphia, Pa.

All of you at one time or another may have wondered why the appendix you had just seen removed did not look worse than it did. Considering the patient had fever, an increase in leukocytes, had been vomiting, had pain in the abdomen and tenderness over McBurney's point, you had expected to see the surgeon remove an acutely inflamed appendix instead of a rather normal looking organ. The appendix may or may not have contained a freely movable fecalith, it may have been a little short, a little long, a little kinked, it may have been covered with a membrane, but its color was in no way different from the cecum and terminal ileum.

Further search for possible pelvic trouble on that side, examination of the terminal ileum for a diverticulum, or an exploration upward of the gall bladder may have been made; and the urine report was again examined to see if pyelitis had been overlooked. Nothing more being found, the wound was closed and the patient made an uneventful recovery. The pathologic report came back and showed chronic appendicitis, and without thinking, we justified the stand we took in having the appendix out. However, the operation was for acute appendicitis and we know that any appendix will show chronic changes. No harm had apparently been done and the patient convalesced satisfactorily and in due course of time returned with pain in the same location.

The medical man is prone to say that this pain is due to adhesions, although we all know that adhesions which do not cause com-

plete or partial obstruction to a hollow viscus do not cause symptoms and are therefore harmless. Another possibility considered is that one of the superficial nerves was caught in the scar, or, if the patient is female, that the right adnexae may be the cause of the trouble. If the pain is persistent enough, a second operation may be performed with the above possibilities in view, or that a foreign body has been left behind. Nothing more definite was found than at the first operation, but under rest in bed and post-operative regime, the patient is more comfortable.

This patient may end his surgical career right here, may be lost sight of to another doctor, or go on as I have seen them until there are twenty-six abdominal scars. In fact, this type of history has become so common in my experience that I am suspicious of every case with multiple abdominal scars.

The true explanation back of these cases was the subject of an intensive search for many years by my late chief, Dr. John B. Carnett. Under the title of Intereosatal Neuralgia of the Abdominal Wall (1) he published his first thoughts in this matter in 1926. Since then, there have been numerous publications by himself (2,3) and by the two of us (4,5), showing the extent to which pain in the surface covering of the body may be mistaken as arising from the underlying viscus. As a matter of fact, it is my belief that fully eighty per cent of all abdominal pains is pain within the abdominal wall rather than within the abdominal cavity itself. Just as syphilis has been accused of imitating practically every other disease, just so parietal tenderness may confuse any number of clinical pictures.

Having satisfied ourselves that this tenderness was the explanation of so many errors, a way was sought to differentiate between parietal and visceral tenderness. This Dr.

* Read before the Medical Society of Delaware, Dover, October 10, 1934.

Carnett described very well in his original paper and he called it the A. B. test. It consisted of examining the abdominal wall relaxed (A) as in any routine examination and picking up the point of maximum tenderness. When found, this tenderness may be either in the parietes or in the viscera. The patient is then requested to tighten the abdominal wall. (B). This can be done by ballooning out the abdomen, attempting to raise both heels off the bed with the knees stiff, or sit up without using the hands. The examination is then repeated, and if there is no tenderness at the point of the previous maximum tenderness we decide that the tenderness originally found was visceral. If, however, tenderness still persists we know that some of it is in the parietes because our fingers are kept away from the viscera by intervening tensed muscles, but we do not know how much tenderness may also be in the viscera. The area is then anesthetized, either by local infiltration or conduction anesthesia and the examination repeated with the abdominal muscles relaxed. If the anesthesia is successful, pinching of the skin and fat will not be painful. If pressure with the fingers gives tenderness now it shows that tenderness is in the viscera, and if there is no tenderness then all of it which we found originally was in the parietes.

Fearful that this might be misleading in some acute cases, I infiltrated the parietes in numerous cases of acute appendicitis. After getting the anesthesia in the anterior abdominal wall, I repeated the examination and found that the tenderness was more acute rather than less, due to the removal of the natural protectiveness of the overlying muscles.

For confirmation of the presence of acute inflammatory disease within the abdomen, I know of no test superior to this one of Dr. Carnett's.

Another lesion where the differential tests are of interest is in perforation of the upper intestinal tract. In sixteen cases of perforated gastric and duodenal ulcers I have taken the time to pick up the exquisite tenderness that pressure causes over the board-like rigidity of the upper right rectus muscles. I have then asked the patient to add to that rigidity by voluntarily straining as previously described. At first, I was surprised, and since then I

have learned to expect that as long as the straining is continued, I can put a great deal of pressure on the upper right rectus muscles without causing tenderness, definitely showing the visceral positiveness of the test. Having learned of a way to differentiate between the visceral and parietal tenderness our next thought was to find the cause of this parietal tenderness.

Upper respiratory infections were the commonest cause, with the parietal symptoms coming on at intervals varying with the intensity of the infection. The ordinary head cold is prone to cause the parietal symptoms on the 12th, 13th, or 14th day, but follicular tonsillitis may show evidence of parietal tenderness as early as the second day. Secondly, postural defects, such as kyphosis, scoliosis, and particularly lordosis were found as causes. Postural defects require the addition of either trauma or acute infection to start off the clinical picture of pain and tenderness. Thirdly, osteo-arthritis of the spine. This, of course, is more apt to be found in our patients beyond the age of forty. Less frequently, vertebral injuries and metastatic disease of the vertebrae are found as the causative factors.

The acute infections as cause do not concern us much because they are more or less self-limited, and between attacks, the patient may be quite normal. The postural defects, however, are far more interesting, most of them can be corrected, and the relief afforded by some minor corrections is almost miraculous.

In order to get some idea of the importance of posture or body mechanics to disease I paid several visits to the clinic of Dr. Joel E. Goldthwait of Boston. This was the result of reading Cochrane's *Orthopedic Surgery* (6) and Dr. Leah Thomas' *Body Mechanics and Health* (7). Both of these authors founded their work on the clinical experience of Dr. Goldthwait. Here I found that poor posture was supposed to produce its various deviations from normal because the diaphragm was neglected. In short, gravity starts the downward pull of all the body structures and in the descent the diaphragm suffers markedly. As the diaphragm is the venous pump, interference with its function leads to peripheral congestion, and congestion to bacterial invasion; therefore, their first efforts are directed

toward freeing up the numerous articulations of the thorax and elevation of the diaphragm. This is followed by rotation of the pelvis, with the idea of decreasing the lumbar lordosis.

In our work of trying to reconcile these theories to our findings, I was impressed with the proportion of backs showing scoliosis. Correction of the dorsal kyphosis and lumbar lordosis was much more difficult in the presence of scoliosis. By far, the commonest cause of scoliosis is the fact that lower extremities are of unequal lengths. Taking a group of apparently normal individuals, four out of seven will show one leg shorter than the other. In those coming to us as patients complaining of parietal pain, the percentage is very much higher. Curiously, sixty-five per cent of the cases are shorter on the right than on the left.

Our work of correction now starts by equalizing the length of the legs by raising the heel on the short side. Many cases with this simple procedure get relief and do not return for further correction. Having corrected the scoliosis, Goldthwait's exercises are then started to correct the lordosis.

Among the conditions which have been benefited by first straightening the back, have been parietal pain which was formally thought to be due to gall bladder disease, duodenal ulcer, or stasis, appendicitis, diverticulitis, and many of the pelvic disturbances.

In our early studies, we were concerned primarily, with the abdomen, but more recently our comparisons have taken in the whole body, and we found that neuralgia of any of the spinal nerves may lead to a false diagnosis of trouble with the underlying structure. As an example of this many headaches from which one suffers are scalp aches rather than brain aches; painful shoulder in the absence of sub-deltoid deposit is frequently neuralgia. The so-called tennis elbow must be diagnosed with care, because the patient complains of pain on one side only, but similar tenderness may be found on the opposite side. Tenderness of the mastoid region may frequently be neuralgia without any underlying mastoid disease. Some of the precordial and angina-like pains are often found to be neuralgia. Tenderness of the breasts is more apt to be due to neuralgia than to any

lesion which may be present in the breast, with the exception of an abscess. In other words, a patient frequently seeks advice for a painful or tender mass in the breast; careful examination will reveal that the tenderness is not inherent to the mass. Further clinical proof exists in that removal of the mass for biopsy still leaves the same pain and tenderness as existed prior to operation.

It may be rather startling to hear me say that Dr. Carnett felt that every case of gall stones with reference of pain to the shoulder also had intercostal neuralgia, and that the numerous cases found with gall stones without reference of pain to the shoulder are free of neuralgia. He also believed that belching of air, one of the ancient symptoms attributed to gall bladder disease, occurs only with the patients who also have intercostal neuralgia. I am convinced that these statements can be readily proven by careful clinical observation.

We may go down the lower extremities with similar findings. Involvement of the ilio-inguinal nerve may give rise to symptoms often diagnosed as sprain of the adductor muscles, or cause pain and tenderness often diagnosed as incipient hernia. Tenderness over the inner portion of the knee suggesting injury to the internal semilunar cartilage is frequently purely neuralgia with no trouble with the cartilage. Tenderness over the shin may bring up the possibility of periostitis or even osteomyelitis, yet when the skin and fat are grasped between the thumb and index fingers, the tenderness can be duplicated without touching the bone.

If there is any purpose to be served by this presentation of possible errors, it is to stress the consideration of posture, the shape of the spine, and the length of the legs in making the original examination. These possible errors are based on actual experiences and the correction of them with resulting relief of pain has afforded a great deal of satisfaction.

BIBLIOGRAPHY

1. Carnett, J. Berton: Intercostal Neuralgia as a Cause of Abdominal Pain and Tenderness, *Surg., Gyn. & Obst.*, 625-632, May, 1926.
2. Carnett, J. Berton: Chronic Pseudoappendicitis Due to Intercostal Neuralgia, *Amer. Jour. Med. Sci.*, 579. Nov. 1931.
3. Carnett, J. Berton: A Case of Intercostal Neuralgia Simulating an Acute Intra-abdominal Catastrophe, *Surg. Clin. of N. A.*, Dec., 1930.
4. Carnett, J. B. and Bates, William: Railway Spine, *Surg. Clin. of N. A.*, Dec., 1932.
5. Carnett, J. B. and Bates, William: Body Mechanics in Relation to Ptosis of the Abdominal Organs, and to Ab-

dominal Pain and Tenderness, Physiother. Rev. Sept.-Oct., 1932.

6. Cochrane, W. A.: Orthopedic Surgery, New York: William Wood and Co.

7. Thomas, Leah C.: Body Mechanics and Health, Boston: Houghton, Mifflin and Co.

DISCUSSION

DR. O. S. ALLEN (Wilmington): This is a very interesting subject to me. I would like to ask Dr. Bates what percentage, if any, of these cases have the so-called rheumatic background. Of course we don't know what rheumatism is, but I mean with the so-called rheumatic background.

Another thing: have you had any experience with girls—it happens mostly with females, though it does occur in the males—around puberty that have the so-called rheumatic background.

DR. BATES: Pardon me, Doctor, I cannot understand you!

DR. ALLEN: Have you run across any of the female species between, we will say, ten and eighteen, it rarely occurs above that, around puberty, that have the so-called rheumatic background with mitral valvulitis that develop pain mostly on the right side, occasionally on the left, which seems to disappear mostly around 17, 18, and occasionally around 20? I really don't know what produces the pain, but so many of these females give a history of having had pain, and of course it is an old story, it is nothing new. They will tell you that they develop this pain, and they develop it while they are walking, and when they stop and rest the pain disappears.

I have always thought, whether I am right or wrong, that it is more or less hitched up with the circulation, and I thought probably that you had some experience along that line, or you might give use the answer to it.

DR. D. R. DAVIDSON (Claymont): I wish to thank Dr. Bates for his presentation of these causes of error. Ever since Dr. Carnett's visit to Wilmington I have been particularly anxious and on the lookout to find absolute intercostal neuralgia. Possibly I have overlooked it.

It has been my feeling that the patients who come in after cold, or grippe, or tonsillitis, with neuralgia are more apt to have it about the neck, or arm, or the actual chest surfaces rather than on the abdominal surfaces. I have seen probably eight or ten involving the abdomen, but about three or four times that many involving the higher nerves intercostal-

ly. I am wondering whether the incidence of your neuralgia is greater in the abdominal wall, and that I may have overlooked some cases, or whether the incidence is really greater in these other parts.

DR. H. L. HEITEFUSS (Wilmington): This paper of Dr. Bates has been very interesting to me because of a personal experience that happened just a couple of months ago.

I was traveling on a brief vacation, when I was suddenly struck with right upper pain. This happened a short time after having some liverwurst and beer. I thought sure that was the cause of it, and I feel personally that I had an acute cholecystitis. It was very painful, and I was in an automobile at the time, over a very rocky road. Fortunately I was not driving. I had to hold my arm (illustrating) this way to get any kind of relief. The pain continued, and when I arrived at my destination I went to see a doctor, and told him the story. He felt quite sure that I had an acute cholecystitis, and the more I thought about it the more certain I was that I had. It is a little hard when you know something about it to be sure of symptoms, but I was quite certain I did have some pain in the right shoulder blade. This was a little vacation trip.

I was given calomel and taken off all food, just put on fruit juices and things like that, so I didn't enjoy myself very much for a few days. The pain became less, but still persisted, and just made things miserable for me for four or five days.

I came home at the end of about seven or eight days, and the pain returned again, right upper quadrant, and I could find a point that was very sore. I then immediately went to a friend of mine in Wilmington and told him the story, and he did a fractional analysis and a gall bladder drainage, both of which were perfectly normal. Then, as Dr. Bates mentioned, going over the abdomen, putting tension in it, the pain was exquisite. I couldn't stand it, and it cleared up very simply with some symptomatic treatment—salicylates—and has never returned.

A little while before all this happened I had had an acute right maxillary sinusitis; but the whole story certainly brings out the fact that Dr. Bates has said, of being accused and accusing myself of an acute cholecystitis

whereas the entire thing was intercostal neuritis.

DR. BATES: I will hurry this through because I know you are anxious to get to the election.

In answer to Dr. Allen's question regarding statistics, I am not able to give you any figures, but it is a very common picture with us to see the adolescent with their cardiac symptoms with intercostal neuralgia, but we connect the causative factor, the infection, whenever we can find it, sinus, or tonsils, and so on, to the heart, as giving rise to the intercostal neuralgia.

Now as to the choice of location, whether it is on the right or left, you will find that most of those pains without treatment of the infection begin to disappear as soon as your patient is kept strictly in bed. That is true, isn't it?

DR. ALLEN: Yes.

DR. BATES: Then the location of your pain, where it comes to the surface, is due to their postural defect.

Sixty-five per cent have a short leg, and the rest of them are over here (indicating). The hookup is not between the parietes and the heart, but the cause of the heart plus the parietes, and the location depends upon the postural defect.

Dr. Davidson's findings of neuralgia: we have to have a little bit of time with a man actually in the clinic to pick up any place near as many intercostal cases as we pick up. As it may be said, it is perfectly true that when somebody rides a hobby, he may see them where the other fellow misses them; but I am interested in his assertion that he finds more in the chest than he does in the abdomen. There is one type of person where he will find more intercostal neuralgia in the chest than in the abdomen, and that is the person working where there are looms, and he will stand this way (indicating) weaving the threads of the loom, so that muscles of the neck and chest are on stretch, and then when he has his acute infection the muscle which has been spastic from overuse governs the distribution of his pain, and he will get upper chest pains; whereas the ordinary patient, with his dropped abdomen and slouched figure is more apt to give us the abdominal picture than the chest picture.

Dr. Heitefuss' picture is a typical one. In addition to his description of having an infection before he started the ride, he also has a little drop of the right shoulder, and I think a scoliosis. (Laughter). I would like to predict that he was riding on the right hand side of the car.

DR. HEITEFUSS: Right.

DR. BATES: If you see a patient who is a road hog, and who continually wants to drive on the left side of the road, he has right-sided intercostal pain, and he rides over this way (indicating) to stretch his spine. Every time you get a chance to stop a road hog, poke him, and he has pain on his gall bladder, and he ought to drive a right hand car. If Dr. Heitefuss had changed his position in the middle of his trip, it would not have been so painful.

THE USE OF SERUM, OXYGEN AND ARTIFICIAL PNEUMOTHORAX IN THE TREATMENT OF PNEUMONIA*

HENRY DRAPER JUMP, M. D.
Philadelphia, Pa.

Pneumonia, cancer, heart disease and kidney disease continue to be the most frequent causes of death. Preventive and curative medicine have not made any notable reductions in the mortality from them. In contrast, smallpox has been almost eliminated by vaccination; tuberculosis destroys only about one-third the number it did thirty years ago, because of general measures of hygiene and sanitation; the incidence of typhoid fever has been greatly reduced by the same means and, latterly, by immunization; diphtheria mortality has been reduced from about 40% to less than 10% by means of an antitoxin and now it is about to be eliminated by immunization; scarlet fever and measles will probably succumb soon to the continuous attacks upon them.

But pneumonia goes on year after year, killing the old and debilitated, attacking the flower of our youth, and exacting a toll of 25 to 30 per cent despite all efforts to cure. It still remains one of the chief captains of death.

SERUM

The introduction of diphtheria antitoxin and the proof of its value in curing that dis-

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ease led to many efforts to make an antitoxin for pneumonia. Disappointment followed disappointment until Rufus Cole, working at the Rockefeller Institute, produced his antiserum. Statistics compiled by Cole showed a marked lowering in the death rate of type one cases, and a moderate reduction in type two. Other users did not have such marked success. The large amount of serum needed, and the severe reactions which followed its use led to efforts to improve the serum. The antibody solution of Huntoon promised much, but it was soon found to be less potent than the whole serum of Cole, and to cause such marked febrile reactions that it was abandoned. Then we had offered to us the antiserum prepared by the method of Felton. This is highly concentrated and refined, with a low content of serum protein. It has been used since 1924 in a great number of cases, by many clinicians. The statistics which they have gathered command belief in its efficacy. A noted physician has said that when the serum is used at the onset of the disease its success is comparable with that of diphtheria antitoxin. While it can be used with advantage on the second and third day, its most notable value is seen when it is given within the first twenty-four hours of the disease. It is then, in this particular, like other curative serums.

The statistics of Cecil and Plummer (Cecil's Text Book of Medicine, 3rd Ed. W. B. Saunders Company, p. 1933) are representative of the results got by its use. In 1930 they reported on the use of Felton's concentrated serum in 473 cases. The mortality in these was 20.1%, while that of an equal number who did not receive the serum, was 31.2%. If only those who received the serum in the first few days of the disease were counted, there were only 11.7% of deaths. The mortality in type two cases was little reduced, but they felt it was the most promising agent available.

Method of Administration

Type the sputum at once: this can be done in four hours by the method of Sabin. If the invading organism be other than type one or two pneumococci, the serum will not be of use. Elicit from the patient the history of previous injections of horse serum, asthma, or other condition, which may induce serum

sensitivity. Do a conjunctival or intracutaneous test with 1-10 dilution of serum, a vial of which is provided with the package of serum. I prefer the intracutaneous method for it is less sensitive: one who gives no reaction with this in 15-20 minutes is perfectly safe to receive serum, if it be given very slowly. If the patient be allergic he must be desensitized by giving first subcutaneously and then intravenously, ascending doses of serum, beginning with a very small dose, 0.025 c. c. In the non-sensitive case give intravenously 1 c. c. of the antiserum, taking five minutes for its injection, and 4 c. c. more in the next five minutes. Then give 15-20 c. c. every two or three hours until 100 c. c. have been given. On the second day give one-half this quantity if conditions have improved, or an equal amount if they have not. The same is done on the third day. There is no use continuing beyond the third day.

Allergic reactions will appear within a few minutes after the first injection, if at all, with symptoms of shock, dyspnea, flushing of the face, great anxiety, and sweating. The injection must then be stopped and 0.5 c. c. epinephrin solution 1-1000 given hypodermically. Repeat this dose every half-hour for 2 or 3 times if the symptoms continue. They do not recur with subsequent injections.

Thermal reactions may occur in one-half to one hour. These are manifested by chill and high fever, which lasts several hours and then drops suddenly. These seldom occur when a reliable serum is used.

Serum sickness appears in 7-11 days in about 25% of cases. It is manifested by urticaria, temperature of 101°-10° F and painful joints. Its severity depends on the amount of serum used and usually subsides in several days.

OXYGEN

The use of oxygen in the modern way has contributed so much to the comfort of pneumonia that there is a distinct impression that it saves life. The nature of the improvement is such that this belief is incapable of statistical proof. Normal blood is about 95% saturated with oxygen. In bad pneumonia this may fall to 75%. This decrease is most notably shown by cyanosis, which is in proportion to the anoxemia. Respiration becomes rapid, shallow, labored; the pulse rate increases and

diastolic pressure falls; nausea, vomiting, vertigo, weakness, delirium, coma, heart failure and death may ensue.

Inhalation of air with a concentration of 40 to 60% oxygen will usually raise blood concentration to normal in 2-3 hours; cyanosis is then relieved and other symptoms lessened. The distressing condition of anoxemia adds to the burden the patient is carrying and reduces his chances of recovery. The relief of this, then, must be of benefit. The patient becomes more quiet and comfortable, respiration becomes slower and deeper, pulse rate decreases, and sometimes the temperature drops and he sleeps. We often err by not starting the oxygen early. It should be applied as soon as cyanosis appears.

The *oxygen room* is the most effective way of administration; it is expensive and has been installed in only a few hospitals. The *tent* is almost as effective but it, too, is expensive. One house in Philadelphia which rents tents, charges \$20.00 a day. This includes the oxygen used and service for the apparatus. At the Philadelphia General Hospital we have cut the expense of giving oxygen by greatly reducing the soda-lime mixture, the purpose of which is to absorb the CO_2 exhaled. The chemist of the hospital estimates that without this mixture the CO_2 rises but little above that of the atmospheric air. This amount is not harmful and indeed Henderson claims an increase is desirable and arranges to have an increased amount in the tent which he has devised. Expense has also been considerably reduced by substituting commercial oxygen for the chemically pure. The former is comparatively pure and certainly is more so than atmospheric oxygen. In the older type of tents it required 4-5 litres per minute to give the optimum concentration (40 to 60%). In the newer ones 2 litres per minute will suffice. Once begun it is necessary to continue the oxygen day and night until the patient is better. It costs us at the Philadelphia General Hospital \$3.00 to \$4.00 a day.

Oxygen may also be given effectively by means of the *nasal catheter*. A 12-14 size catheter is inserted through the nostril to the pharynx and withdrawn a half-inch to prevent the stream of oxygen from irritating the mucous membrane. Additional holes are made in the inner end of the catheter, and the ex-

ternal end is connected to the tube from the oxygen tank and fixed to the cheek with adhesive tape. The nasal and pharyngeal cavities should be sprayed with liquid petrolatum every two hours and the catheter changed every twelve hours to minimize irritation. The inhalation is more effective if the patient keeps his mouth closed and breathes only through his nose.

In a recent publication Barker et al. (J. A. M. A., 103: 244, July 28, 1934) claim that a concentration of 40 to 60% in alveolar air may be obtained by the catheter. Thirty-five per cent can be obtained with 6 litres per minute, and 50% with 10-12 litres per minute. The cost of oxygen by catheter is therefore more than by tent, but this is partly compensated for by the original cost of the tent and its upkeep, and the difficulty of operation. But this last may be ignored, for any good nurse can soon be taught to handle it.

ARTIFICIAL PNEUMOTHORAX

This is the most recent agent offered for the treatment of pneumonia. It was originated by Friedman (Detusch. Med. Woch., 47: 433, 1921), who treated six cases successfully with it. It was then only occasionally used until 1932, when J. J. Coghlan (Lancet, 50: 13, 1932) revived it. He had five recoveries in six cases treated. Last winter, 1933-34, it was used in forty cases in the Philadelphia General Hospital, with enough success to encourage its continued use. The mortality in these was 35% (3 died within 8 hours), and in the control group admitted in the same period and with the same variations of duration, extent involved, &c., it was 51%. These are high figures in pneumonia mortality, but at the Philadelphia General Hospital they have always been high, because of the character of cases admitted to this big, free, municipal hospital. Many are greatly debilitated by previous disease, dissipation, malnutrition; many are admitted in advanced stages with the forlorn hope that hospital treatment may save them. The paper by Albert Behrend (J. A. M. A., 102: 1907, 1934), discusses eleven of these cases; and one by Behrend, Tuck and Robertson, not yet published, will analyze the results of the treatment in the whole group of 40, which includes all that were admitted to several services, including mine. Quoting

these two papers, the following points may be laid down:

Results

Relief of Pain. This was most striking, and was due to separating the two layers of inflamed pleura. With relief of pain deeper breathing occurs and the unaffected lung is better ventilated; cyanosis is consequently lessened. In one of my cases the air did not prevent subsequent adhesion of the layers of pleura. At autopsy nearly all of the pleural cavity was found to be obliterated.

Fall of temperature. Often the temperature fell suddenly as in crisis; in others it declined by lysis. It was noted by Coghlan, Behrend, et al., that the temperature was prone to rise again on the second day and that a second injection of air caused it to fall permanently. The average duration of fever after the first injection was three and a half days, while in the controls it was seven days.

Reduction of Toxemia. The patients seemed better and more alert even when the temperature was not reduced; they were apparently less toxic.

Cough and sputum were lessened in some of the cases.

There was no pleural shock, pyopneumothorax, or other complication which could be blamed upon the procedure. Bacteremia was present in more of the controls than in those treated. Only unilateral cases were treated. At this time the procedure does not appear to be applicable to cases with both lungs involved.

Cause of Improvement

The explanation of the apparent benefit of this treatment is not entirely satisfactory. The compression of the lung is probably the basis. Roentgen ray films showed that the lung was compressed. This reduces the blood and lymph flow through it and presumably lessens the amount of toxic materials entering the systemic circulation. The immunologic agents have then a smaller force to combat and are more apt to gain ascendancy.

Technique

The air is injected with the usual two-celled apparatus which is used in producing artificial pneumothorax in pulmonary tuberculosis. The patient reclines on his unaffected side with a pillow under it and his arm raised above his head to widen the intercostal spaces.

The tissues, including the parietal pleura, are anesthetized with 1% novocaine. An 18-21 gage needle is used and the puncture is made in the 7th or 8th interspace. When the pleura has been pierced the manometer must show negative pressure with marked oscillations. Then 400-600 c. c. of air is injected, the manometric pressure being measured every 50 c. c. If positive pressure or pain occurs stop the injection to avoid mediastinal displacement. Turn off the air, withdraw the needle, and close the puncture wound with collodion. Repeat the procedure in 18-24 hours, for the air is quickly absorbed. Two insufflations are usually sufficient; a third may be used if the temperature does not fall. Adhesions may limit the amount of air used, or prevent the entrance of any. The air was given on the first to the fourteenth day of the disease, but usually on the third to fifth. The results were better when it was given early.

SUMMARY

Each of these agents is a beneficent factor in the treatment of pneumonia. There is positive evidence of the value of the antiserum: mortality in type one has been materially reduced, and in type two, moderately. The use of oxygen in adequate amounts relieves anoxemia and thereby reduces the burden on the patient's resistance. The value of artificial pneumothorax is still doubtful, but those who have used it have the impression that it is of value and that it has saved some lives. It is probable that combinations of these factors will be advantageous. We may be able to crystallize about them in an effective attack upon the disease. Each of them is most effective when used early, so that we are brought back to the necessity for early diagnosis and the institution of early attack. A vigorous offensive is the best defense.

DISCUSSION

DR. ROBERT W. TOMLINSON (Wilmington): I have enjoyed Dr. Jump's paper very much. Any man who has been matriculated in the Philadelphia school, and who has paid any attention to the eulogy which is paid to the speaker both at the hands of the faculty and the students, knows very well his reputation.

There is one question I would like to ask. Perhaps this thing is passe now under Dr. Kolmer's tutoring. Concurrently with the portrayal of the use of vaccines he advocated

pneumoquin. I would like to know if in your opinion it has any therapeutic value as an agent.

I was very much relieved to hear you say that the application of this mechanical principle of correction is only feasible in the unilateral instances, and not in the bilateral pneumonia.

DR. HENRY JUMP: I have used pneumoquin occasionally, and I reckon if it is used very carefully you will not get bad results, but the possibilities are pretty strong in favor of optic atrophy injury. You don't give much liquid in order to get a concentration of your pneumoquin in the blood, and the patients just suffer.

I remember a youngster not very long ago pleading for another drink of water, and when we gave him a little he wanted another drink; and so it was. He made a recovery, but he was not very sick to begin with, and I got him at the very beginning. I made the diagnosis over the telephone and saw the boy a few minutes afterward, when we got him started. I happened to have some of this pneumoquin with me, so I used it. That is an ideal condition. Patients just will not respond that way very often.

Your other thought was about the bilateral pneumonia. So far we have not dared to think of it any more than we did originally in bilateral tuberculosis; but we are getting around to believe that maybe some of the cases of bilateral tuberculosis might be treated with pneumothorax. This is certainly the most distinct advance in the treatment of tuberculosis, a direct measure, when we have been treating and getting improvement by the indirect means of hygiene and sanitation.

That is a home-made apparatus, made by the engineer at the hospital, because they wouldn't let us have one of two that they had in the tuberculosis ward. Therefore, we asked the engineer to make this, and it works just as well. I see that another has been offered by Burgess Gordon, which claims to be a more easily applied apparatus for artificial pneumothorax.

Dr. Hopkins asked me today what I thought of hot packs, and I reminded him of the recent thought of the electro-therapists that diathermy is of value in the treatment of pneumonia. I have had practically no experi-

ence with it, but these gentlemen who apply it are perfectly positive that they have produced remarkable improvement by the generation of heat within, at the point where the lung is most infiltrated. It, again, must be applied early in the disease; but as our subject was these three remedies or measures we cannot go into any of those others.

--- **PYELITIS IN CHILDREN ***

CHARLES E. WAGNER, M. D.,
Wilmington, Del.

The condition commonly termed pyelitis, was first described in childhood by Huttenbrenner, in 1876. He emphasized the extreme frequency of the disease and the ease with which it might be overlooked. Fever, poor appetite, and pyuria seemed to be the principal symptoms. Strictly speaking the term pyelitis should be applied only to those cases in which we know the infection is limited to the kidney pelvis. Pyuria really should be applied to those cases which we now call pyelitis, for it is usually impossible to localize the infection in any one organ of the urinary system by the clinical symptoms or the physical findings which may be present.

Pyelitis may occur in the newborn. It is most frequently encountered, however, from the third to the eighteenth month of life, a period corresponding closely to the diaper age. In the newborn infant it is found more often in boys. From two weeks of age to two years of age it occurs about nine times more frequently in girls than in boys, and after two years of age the ratio is about four to one.

There is an increased incidence of the disease during the summer months when there are more gastro-intestinal disorders, and also in the winter months when upper respiratory infections are common. A case is often diagnosed grip which later proves to be pyelitis. Infections of the skin may also cause secondary infection of the urinary tract. Stasis due to obstruction caused by stones, valves, strictures, and phimosis, or lack of urinary secretion, as in acute intoxication, cyclic vomiting or vomiting from any cause, predispose to infection.

Gram negative bacilli belonging to the colon group are found in about three-fourths

* Read before the Medical Society of Delaware, Dover, October 9, 1934.

of the cases. Staphylococci, streptococci, and pneumococci are the chief causes in the remainder of the cases. It might be said in passing that a catheterized specimen of normal urine shows no bacteria if the technique is carried out without contamination.

We are handicapped in determining the mode of infection because of the fact that cystoscopic examination and ureteral catheterization are rarely resorted to in the acute stages. The routes by which infection takes place for that reason shall only briefly be mentioned as follows:

1. Hematogenous. The frequency with which pyelitis occurs in various forms of sepsis and upper respiratory infections would indicate that infection of the renal pelvis may take place through the blood stream.

2. Ascending through the urethra, bladder, and ureters. The frequency of pyelitis during the period when children are wearing diapers leads us to believe from clinical observation that infection most frequently takes place by this route, even though some writers contend that the valve-like action of the ureters passing obliquely through the bladder wall prevents the upward course of organisms from the bladder.

3. Lymphatic. We have no proof that infection occurs in this way. Organisms may be carried by the lymphatics from the intestinal tract to the capsule and thence to the pelvis of the kidney. It has also been suggested that organisms gain entrance to the blood stream by way of lymphatics of the external genitalia and then reach the kidney through the blood stream.

Pyelitis is often overlooked during the first week of life and occasionally accounts for unexplained fever at that time. The infection usually persists for only two or three weeks unless there is some obstruction of the urinary passages.

The onset of pyelitis in infants under two years of age is usually acute and associated with fever. It may be associated with convulsions, with rigidity of the neck, with vomiting or with marked diarrhea. When the illness has persisted for a short time the child usually has a peculiar ashen pallor, unexplained restlessness, and an expression of anxiety. In the milder cases there may be slight gastro-intestinal disturbances and very

little fever. Severe cases may terminate fatally and are characterized by nausea, vomiting, rigidity of the neck, coma and convulsions.

The temperature, as a rule, is high, but in marantic infants there may be practically no fever. The temperature may remain high and come down suddenly by crisis, as in lobar pneumonia. In the septic type the temperature varies between 97° F. and 106° F. Transient blocking of the ureter may cause sudden rise in temperature associated with temporary absence of pus from the urine.

Symptoms pointing toward urinary infection are found more often in children over two years of age. Pain in the lower part of the abdomen, burning, tenesmus, and most commonly frequency of urination may be present. These symptoms are probably due to involvement of the bladder, as pain just above the symphysis pubis is a common complaint. The usual onset is slow and gradual, as in typhoid fever, but it may be acute with fever suggestive of pneumonia. Whatever the type of onset, the presence of pus and organisms in the urine is necessary to establish the diagnosis.

Chronic pyelitis may occur in two forms. In one the symptoms are indefinite and obscure; in the other there is a series of recurrent attacks of fever. Congenital malformations of the genito-urinary tract are often a cause.

The course of pyelitis in both infant and older child is usually favorable. When death occurs it is generally due to pyelonephritis resulting from repeated attacks. Relapses are common. A case should not be pronounced cured until at least two sterile cultures are obtained at intervals of several days after treatment has been discontinued. Even then reinfections may occur.

Pyelitis can be suspected in a case of high fever associated with pallor and restlessness, but a definite diagnosis should be made only after the demonstration of pus and bacteria in the urine. The disease occurs so frequently that we really ought to examine the urine of every child who has fever. In actual practice this is not always possible, but certainly if the fever persists more than three days a urinalysis should be made. We should not, however, fall into the error of making a diagnosis

of pyelitis every time we find a few pus cells in a specimen of urine.

In obtaining a specimen of urine for examination care should first be taken to cleanse the external genitalia. A vaginal infection or inflamed prepuce may be responsible for the presence of pus in the urine. An uncentrifuged specimen, obtained with special precautions contains not more than two or three pus-cells to the low powered field in the urine of boys, and not more than six to eight cells in the urine of girls.

When pyelitis is present the specimen is usually cloudy, acid in reaction, and contains a trace or more of albumin. On microscopic examination many pus cells, frequently in clumps, are found. Under high-power magnification large numbers of bacteria are seen.

When in doubt about the diagnosis a catheterized specimen of urine should be obtained. The usual sterile precautions should be taken, and the area around the urethra dried with a sterile applicator or gauze before the catheter is passed. It is well to let a small amount of urine pass before collecting the specimen, as the introduction of the catheter may carry in bacteria from the urethra.

If a case of pyelitis persists after intensive treatment for a month or six weeks, a cystoscopic examination should be made. Cystoscopes have been greatly improved in recent years for use in children. We are also very fortunate in Delaware in having urologists who are competent and skilled in making complete examinations of the genito-urinary system. I wish at this point to make a strong plea for closer co-operation between the urologist and general practitioner or pediatrician in cases of chronic or recurrent pyelitis in children.

Congenital defects of the urinary tract are more common than we would suppose. Consultations of urologists in several cases I have had have resulted in the finding of unusual congenital defects or unreteral stricture following infection. I was formerly too conservative in the matter of calling upon a urologist, but in recent years I have been more than convinced of the wisdom of it in persistent cases.

Washing out of the urinary tract is the most important feature in the treatment of pyelitis. As much fluid as possible should be

given. If an infant does not care for pure water, a little dextrose may be added. He should receive at least a quart a day and as much more as possible in addition to food.

Retention enemas of normal salt solution may be given every three or four hours if fluid is not well tolerated by mouth. A Murphy drip is not very successful in children. Teaspoonful amounts of water at frequent intervals are often well retained when larger amounts are vomited. Normal salt solution may also be given intraperitoneally if oral and rectal administration of fluid is inadequate.

The general nutritional condition must be watched. Feeding by gavage should be resorted to in cases of infants who have anorexia. Constipation should be relieved with enemas rather than with laxatives. Spongebaths may be given to lower the temperature.

In addition to forcing of fluids, treatment with alkalis has brought about the best results in acute cases. Sodium citrate and sodium bicarbonate are given until the urine becomes definitely alkaline. The quantity of bicarbonate needed to accomplish this is approximately 15 grains for each year of the child's age, given every four hours. The quantity of citrate is slightly in excess of this amount. Potassium citrate should not be used.

The drug of greatest value as a urinary antiseptic is methenamine (urotropin). Its action, of course, is dependent upon the setting free of formaldehyde in the urine. The more acid the urine is the more rapid is the formation of formaldehyde. Calcium and ammonium chloride have been used for acidification, but they are nauseating to most children.

Recently I have used a tablet called Uro-Phosphate, made by Wm. P. Poythress and Company, of Richmond, Virginia. It contains $7\frac{1}{2}$ grains of methenamine and 10 grains of sodium acid phosphate. It is not unpleasant to take and the results have been excellent in the few cases in which I have used it. It should be discontinued if hematuria occurs, and should be temporarily discontinued if large doses cause burning on urination.

From work done by Shohl and Janney, it is known that the colon bacillus is inhibited if the acidity or alkalinity of the urine is increased beyond a certain point (pH 4.6 to 5, acid, and at pH 9.2 to 9.6, alkaline). The

optimal growth of colon bacilli takes place at pH 6 to 7; this is the average reaction of the urine of a person who is on a mixed diet.

Drainage by forcing fluids and alkalization are believed sufficient to cure almost all cases of pyelitis. In cases of subacute or chronic pyelitis most writers are agreed that urinary antiseptics are of undoubted value. Among other remedies that have been used may be mentioned intravenous injections of mercurochrome or arsphenamine preparations, acriflavine by mouth, autogenous vaccines, and non-specific proteins. Foci of infection should, if possible, be removed. Improvement often follows removal of carious teeth and diseased tonsils and adenoids.

Recently ketogenic diets have been used successfully. In the presence of ketosis, the urine becomes free of pus and organisms. The patient is then gradually returned to a normal diet. Without going into detail regarding this method of treatment I shall refer you to an article by Helmholtz in Proc. Staff Meet., Mayo Clinic, 7: 260, 1932.

SUMMARY

1. Pyelitis in children is an ascending infection of the genito-urinary tract in most cases.

2. Gram negative bacilli belonging to the colon group are the organisms most frequently found.

3. Forcing fluids and alkalization will cure most cases.

4. Subacute or chronic cases respond best to treatment with methenamine and acid sodium phosphate.

5. If a case persists for more than six weeks without much improvement, a complete urologiv examination should be made.

DISCUSSION

DR. BRICE S. VALLETT (Wilmington): I just want to say a word about Dr. Wagner's paper. I feel that up until the last few years there has been a lot of sentiment on the part of parents about having their children cystoscoped, but the instruments are very tiny now and children can often be cystoscoped under local anesthesia, while some of the more refractory types can be given a very small dose of veratrum, which puts them to sleep, and they sleep right through the cystoscopy.

Pyelitis is a rather serious addition, and if not cleared up in infancy or in childhood tends to become drawn-out and follow the child into later life.

Another advantage of cystoscopy is that it will often clear up the diagnosis and show where you are dealing with a congenital defect or some obstructive factor.

There are other methods of diagnosis such as intravenous methods, intravenous urography, but that probably is inferior to cystoscopic measures in making a diagnosis.

The ketogenic diet I think is very important in treatment, and can be used in children the same as in adults. Children can take remarkably large doses of the urinary antiseptics, particularly methenamine, and in some clinics they give methenamine to children to the point of hematuria; in other words, they give it until the child bleeds.

It is probably not well to give the methenamine and ammonium chloride together. The better plan is give your methenamine last.

I think this paper of Dr. Wagner's is very timely, and I think we ought to have a paper by a pediatrician at every state medical convention.

Repeated Lumbar Punctures

William Sharpe, New York (*Journal A. M. A.*, March 23, 1935), states that lumbar puncture is an important diagnostic aid and that repeated lumbar punctures of spinal drainage are of therapeutic value in selected cases of traumatic and allied lesions of the central nervous system. Diagnostic and therapeutic lumbar punctures are without danger when properly performed. The manometric attachment should always be used and only the amount of cerebrospinal fluid necessary to lower the pressure to one-half of the initial pressure should be withdrawn. In the most frequent subarachnoid type of traumatic intracranial and spinal hemorrhage, in adults, children and the new-born, and in the spontaneous subarachnoid "apoplexies" of the elderly, repeated lumbar punctures of spinal drainage not only reduced the mortality but gave a higher percentage of recovery of function. Therapeutic lumbar punctures of spinal drainage, combined with dehydration, have lessened by about 20 per cent the advisability of operative cranial drainage in head injuries in adults and by more than 50 per cent in the new-born.

EDITORIAL

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W. EDWIN BIRD, M. D. EDITOR

Du Pont Building, Wilmington, Del.

WILLIAM H. SPEER, M. D. Associate Editor

917 Washington St., Wilmington, Del.

M. A. TARUMIANZ, M. D. Associate Editor & Bus. Mgr.

Du Pont Building, Wilmington, Del.

Telephone, Wilmington, 4368

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IMMUNIZE NOW

May Day—Child Health Day has become an established institution throughout the United States. It was inaugurated in 1924 by the American Child Health Association for the purpose of calling the attention of parents, communities, and the public in general to the need for measures to protect the health of children.

In 1928 the United States Congress passed a joint resolution designating May first as Child Health Day, and authorizing the President to issue a proclamation requesting national observance of the day. In 1929 the Conference of State and Provincial Health Authorities of North America appointed a May Day Committee. In 1932 this committee took over from the American Child Health Association, with the continuing assistance of that association, the responsibility for the annual

observance of Child Health Day. In the states the work is under the direction of State Departments of Health.

Child Health Day celebrations are intended only to mark and emphasize either the inauguration or the culmination of year-round work for improvement of the health of children. The project for 1935 is diphtheria immunization. This was chosen because there has been but little reduction since 1930 in the number of deaths from diphtheria throughout the country. While particular emphasis will be laid on immunization this year, it is not intended that the project be limited to 1935. On the contrary one of the chief objectives is to have the work continued year after year by the medical profession.

"Immunize Now—Stamp Out Diphtheria," is the slogan.

The measures proposed are:

To immunize all children between the ages of six months and six years.

To make every immunization a routine practice by all physicians.

The majority of pediatricians do immunize the babies under their care during the first year of life. Physicians in general practice also should follow this procedure.

State Departments of Health and the unofficial organizations interested in children are calling the attention of parents and communities to the need for early diphtheria immunization. Each individual physician should be prepared to take care of the applications for immunization. Co-operative plans for this work have been made by the local medical societies and the Departments of Health in this state. While the medical societies have perfected plans for this phase of preventive medicine, there is no reason why it would not be possible to assume gradually other types until eventually preventive medicine forms an important part of the practice of all physicians. This project offers an opportunity for the physicians to assume their rightful leadership in the preventive medical work of their communities.

WOMAN'S AUXILIARY, A. M. A.—

President—Mrs. Robert W. Tomlinson, Wilmington, Delaware.

President-elect—Mrs. Rogers N. Herbert, Nashville, Tennessee.

If you have read the last copy of the *Bulletin* you will have learned much of the many pleasurable events that are being planned for our diversion at the time of our annual meeting in Atlantic City in June. We have, this year, an unusual opportunity to be of real help to our men by doing our utmost to make the visit of our Canadian friends a pleasant one.

It is my understanding that this will be the largest medical meeting that the world has known. The Medical Associations of the two largest countries in North America will join together, and ours is the joy that will come in extending our hands and opening our hearts to our northern neighbors. It is my hope that each of us to whom is charged responsibility will have completed every preparation well ahead of time so that our days may be as unencumbered with unnecessary duties as possible. The program that the convention committee is planning for our interest and pleasure is one of great attraction. Never will we be far from the sun, sea air and the boardwalk. Our meetings, as well as most of our social events, will be within sight of the great Atlantic Ocean.

To committee chairmen I send my gratitude for your co-operation this year. Without it my task would have failed. And remember that when you write your ten-minute reports for the meeting, that the combined information included in their pages, will inform our members of the great amount of fine work that you have done.

To State Presidents—Words almost fail me when I try to acknowledge what you have accomplished. Remember that your national officers are but the ties that bind. That to you are we indebted for the splendid performance of this year's work. Give the best that you have to your three-minute reports, for from all over the country I hear of renewed interest. And be sure that if you cannot read it yourself, you have a deputy, for otherwise it is not read but placed on file and printed with the annual report.

To each and every member I send my hearty thanks and deep appreciation of what your loyalty to your husbands' profession has done to arouse enthusiasm for the type of work and pleasure that the Auxiliary may promote.

Will you pass these words along to the wife of every physician, that while the Auxiliary may have the opportunity of making plans for this meeting by the seas, only the co-operation of every doctor's wife will carry these plans through to a happy fulfillment. We hope that each and every one of them will join with us in our welcome to the Canadian women, and share with us whatever may be of interest and pleasure to them.

MRS. ROBERT W. TOMLINSON.

The *California Medical Auxiliary Courier* made its first appearance at Christmas time and a most effective one it was, too. It is the official publication of the Women's Auxiliary to the California Medical Association of which Mrs. Philip Schuyler Doane is president. The periodical, which is to be sent out twice a year, is edited by Mrs. Elmer Belt, state chairman of press and publicity, and speaks volumes for her clever and brilliant mind. The purpose of the publication is to answer the question "What does the Auxiliary do?" The first issue tells of the part, a large one, played by the Auxiliary in San Diego in bringing to completion a pool for crippled children. The plant which was completed in September, consists of a pool, examining rooms, rest rooms, corrective gymnasium, and administration offices. Arrangements have been made for temporary use of a small hospital nearby, which is the property of another organization.

Some of the patients treated are pay patients, some are paid for by state funds, while others are cared for by the Crippled Children's Society of San Diego. The Auxiliary has co-operated in raising funds and in donating valuable personal service.

The story of the Auxiliary's part in the November election in California when the Chiropractic and Naturopathic initiatives were defeated, is one of real service to medical standards. Through a program of education and by means of actual, gruelling labor, the

Auxiliary was a great factor in the defeat of the bill.

Mrs. John V. Barrow, president of the Los Angeles County Auxiliary, has an interesting idea for the coming year. She plans to give fifteen minutes of each meeting to a program of education for the members themselves. She has named this "What the Doctor's Wife Should Know." Under this will come such topics as: A comparative study of educational requirements for doctors of medicine, public health doctors and nurses, dentists, osteopaths, and chiropractors; Clinics public and private; food handlers; eugenics; anti-vivisection; Mother Welfare; Security for the Child.

READING LIST

The Evils of Social Insurance—MEDICAL ANNALS OF THE DISTRICT OF COLUMBIA, February, 1935.

The Shortcomings of Health Insurance—ILLINOIS MEDICAL JOURNAL, February, 1935.

Catechism on Sickness Insurance—OHIO STATE MEDICAL JOURNAL, February, 1935.

Animal Experimentation — Editorial, HYGEIA, March, 1935.

MRS. ROBERT E. FITZGERALD,
Chairman of Press and Publicity.

MISCELLANEOUS

International Physiological Congress

It is estimated that between 200 and 300 medical men and scientists from the United States will attend the Fifteenth International Physiological Congress meeting in Leningrad and Moscow August 8 to 18. A short, inexpensive tour, closely packed with interest, has been officially arranged. Reservations for the tour and for attendance at the Congress may be made through THE JOURNAL for the groups sailing on the SS. "Laconia" July 19 and on the SS. "Berengaria" on July 25. Both groups will stop over in London and will have the opportunity, also, of attending there the Neurological Congress of July 29, 30 and 31.

A folder describing the expedition will be sent upon request. The present organization of state medicine in Russia is already a matter of world-wide interest to medical men and the tour should be a popular one. Dr. James S. McLester, president-elect of the A. M. A., Prof. A. J. Carlson, head of the De-

partment of Physiology at the University of Chicago, and Dr. George Halperin, of the Journal of the American Medical Association, will accompany these groups to the Congress.

The physicians attending will be registered officially as members of the Physiological Congress and will enjoy all the privileges of such appointment. The Intourist has made sensational concessions in matters of price, and doctors' families may accompany them on the same terms. The scientific features of the tour will include visits to hospitals, research institutions, clinics, children's homes and homes for workers. In addition there will be trips to museums, art galleries, theatres, and many typical new educational and cultural establishments.

From Moscow the delegations will proceed south to Yalta, the heart of the Crimea, visiting several great collective farms en route. A trip by boat along the coast of the Black Sea—the Russian Riviera—will afford the opportunity of viewing some of the most scenic spots in all Europe. The return trip will take the visitors through Warsaw, Berlin and Paris.

Register through THE JOURNAL; it will be to our advantage as well as yours.

American Association on Mental Deficiency---

The annual meeting of the American Association on Mental Deficiency will be held at the Palmer House, Chicago, on April 25, 26 and 27. The Thursday and Friday sessions will be devoted to studies on Mongolism; Birth Injury as an Etiological Factor in Mental Deficiency; Mental Disorders in Mental Deficiency; The Problem of Sterilization; Defective Delinquency and its Relation to Penal Institutions; Community Supervision of the Paroled Mental Defective; and Newer Methods in Institutional Training for Community Life. The Saturday session, on April 27, will be devoted to the sociological, psychological, and the special educational aspects of Mental Deficiency. Physicians are cordially invited to attend these sessions. Complete data on the program may be obtained from the Secretary, Dr. Groves B. Smith, Godfrey, Illinois.

Medical Care on the Normandie

The thousands of doctors in the United States who, as in all other parts of the world, have in their care patients for whom they would like to prescribe voyages at sea for restoration of health and strength, but who up to now have hesitated to order such trips not knowing exactly what emergency hospitalization facilities would be found on the liners used, may now dismiss their worries and let their charges depart without fear as to the special care they can get on board if they need it.

The new super-liner Normandie, world's largest ship, due in New York on the first lap of her maiden voyage about June 3rd, will present as one of the startling features that mark the modern day of scientific advancement in shipbuilding and equipment, a general hospital without a dark or gloomy corner in it and with every appliance and invention known to the world of medical and surgical care today, readily at hand.

The medical care division will be in three parts, i. e., a hospital unit for passengers, another for members of the crew, and a medical and surgical clinic which the medical profession of New York, in all of its branches and ramifications, will be invited to inspect while the great ship is in port between the day of her public reception and the day she starts back to Havre to complete her maiden voyage.

Any emergency that might arise in the matter of caring for human ills or ailments is provided for on board ship. The equipment has been specially manufactured and is being installed by one of the oldest and most distinguished firms of its kind in Paris. If a physician in the United States desires to give one of his patients the benefit of a sea voyage, he has but to deliver the patient on board, with or without attendant or nurse, and into the care of the ship's doctor, with full explanations as to the nature of the case and condition of the patient, whereupon the instructions given as to diet and any details concerning medical or other care, will be observed and carried out as carefully as if the physician himself were on board.

In other words, the doctor on land can, when and after the mammoth Normandie,

flagship of the French line, goes into commission next June, have his orders carried out to the letter on behalf of any patient he cares to send on any trip to enjoy sea breezes and salt air.

When the Normandie shall reach her home port at Havre on any return trip, a patient may go ashore assured that prescriptions issued by the doctor at home, and refilled on shipboard, may be continued in France through the co-operation of the ship's doctor with apothecary shops in Paris and elsewhere. This marks a new day in the general administering of medical care, it is said, and will result in many thousands of persons, seeking better health and strength, making voyages to Europe this year and thereafter, instead of remaining at home because of uncertainty about not obtaining proper medical care at sea.

The new and mighty Normandie which measures 1,029 feet in length, and has a beam of 119½ feet, will be able to carry 2,000 passengers, plus a crew of more than 1,300 men. As one of its departments, the great ship will present for the consideration of an exacting public, a complete establishment for health conservation and strength building. There will be a fully equipped apothecary shop on board with licensed pharmacists in charge.

The possibility of contagion in the medical units on board, is practically eliminated in the case of the Normandie, which is another reassuring point for physicians on land.

Dr. Joseph Bohee, who has been assigned by the French Line to be the ship's chief physician and surgeon when the new flagship puts to sea, has had a long and notable career as a practitioner in Paris and as a ship's doctor. He enjoys a wide acquaintanceship in the United States as a result of his many crossings with American passengers, and his frequent visits to New York.

The technical equipment of the new ship represents the latest and best in every detail that has thus far been devised. For example, the physiotherapy appliances consist of a short-wave diathermical machine with two 250-watt bulbs for use in all local and regional applications. The outstanding medical value here is the effect of heat in atonic cases, as for example in case of indigestion, peripheral

circulation, neuralgia, rheumatism and glandular trouble. The well-known actinic shower invented by Dr. Dausset of the Hotel-Dieu in Paris, with its movable lamp operating on rails, sufficiently powerful to develop 20 amperes, regarded today as the "last word" in artificial sun-baths, will be available to passengers.

The radiology room on the new super-liner will be equipped with a Massiot machine, radiostat at 34, generator PV 4, which has made the use of radioecopy and radiography readily possible.

There will be a total of 35 beds available to passengers should they be needed, and about an equal number for use by the crew in a separate wing, the compact establishment, replete with its fine equipment, being on both an emergency and routine basis so that any service desired may be had. Annex infirmaries will be operated on the same basis for tourist and third-class passengers. Dr. Bohec is to be, of course, the head of the hospital service, and will have two additional doctors as assistants. Seven nurses will be on duty.

For the convenience of passengers, Dr. Bohec will have a public consultation room on B deck near the main hall with office hours from 10:30 a. m. to 12:30 p. m., 3:00 to 4:30 and 6:30 to 7:30 p. m., or he can be reached by telephone from any stateroom, at any time, in case of emergency.

An interesting feature of the ship's hospitalization section will be a tiny drug store, or chemist's shop, which will be located near the entrance to the clinic, and will be ready to fill any bona fide prescription brought from shore or obtained from the ship's doctor on board.

In planning and constructing the hospital and health-building unit for the great Normandie, her engineers and medical directors saw to it that no suggestion of a gloomy or depressing hospital existed. Bright and cheerful colors in various brilliant and impervious surfacings, and settings as uplifting and unlike average hospitals as might well be imagined, are carefully provided. Gloom will not be tolerated on the world's mightiest liner.

BOOK REVIEWS

Useful Drugs: A List of Drugs Selected to Supply the Demand for a Less Extensive Materia Medica With a Brief Discussion of Their Actions, Uses and Dosage. Edited by Robert A. Hatcher, Ph. M., Sc. D., M. D., and Cary Eggleston, M. D. Prepared under the direction and Supervision of the Council on Pharmacy and Chemistry of the American Medical Association. Ninth edition. Pp. 203. Cloth. Price, 60 cents. Chicago: American Medical Association, 1934.

This book represents a valuable and increasingly effective phase of the efforts of the Council on Pharmacy and Chemistry on behalf of rational therapeutics. Since its first appearance in 1913 it has become a recognized work in its field. It has been adopted as a textbook by teachers of therapeutics in the best medical schools and by various examining and licensing boards. The statements of actions, uses and dosage of the various drugs are revised after discussion by the whole Council. They represent the latest and best results of therapeutics and pharmacologic revision. The present edition is in line with the constant aim of the Council, which has been to present a selective and informative yet comprehensive compendium of the more useful preparations in the medical armamentarium. There have been some additions to the list of drugs; a few have been deleted. Individual descriptions show evidence of careful editing. The book is an authoritative, intelligent, critical and entirely adequate textbook for the use of teachers and examiners, as well as for reference by the busy practitioner. It is an integral and constructive part of the Council's efforts in the promotion of the rational use of drugs.

Female Sex Perversion. By Maurice Chideckel, M. D. Pp. 331. Cloth. Price, \$6.00. New York: Eugenics Publishing Company, 1935.

This is the most interesting and informative book on this subject that we have yet seen. The author does not believe that perversion is congenital, and brings weighty evidence to substantiate his belief. His criticisms of other writers seem kindly yet logical. Written for all those who have to do with the upbringing of young girls, mostly laymen, it contains much information that the average physician does not usually know. The warning to parents that they are chiefly responsible for sex perversions in their daughters is one that every conscientious parent should

take to heart. A follower of the Freudian school, Dr. Chideckel cites many cases cured through dream analysis. Such cures represent the silver lining to the generally black cloud of perversion. The few minor errors of grammar should be corrected, as well as the statement (p. 275) that sodium bicarbonate is an alkaloid. Obviously dengue (p. 321) should be dengue. In our opinion the illustrations, which are few, do not add to the value of the book. Dealing with a timely subject in an understanding way, the book merits a wide circulation.

Physical Diagnosis. By Warren P. Elmer, M. D., Associate Professor Clinical Medicine, Washington University, and W. D. Rose, M. D., late Associate Professor of Medicine, University of Arkansas. Seventh Edition. Pp. 919, with 342 illustrations. Cloth. Price, \$8.00. St. Louis: C. V. Mosby Company, 1935.

Any medical book which has reached its seventh edition is certainly of merit. This book in its last few editions has incorporated all the sustaining qualities of the earlier work, and in addition has been rearranged and added to by Elmer. The result is a most readable and interesting text book on physical diagnosis. Such a work has been rare indeed in the recent past.

There is a large section on clinical anatomy and physiology which, appropriately illustrated, clearly gives an accurate picture to the student of the various regions and organs to be examined and gives accurately too the general relationship of one part to another. The section on preliminary observation which is such an important part of the art of medicine is attractively arranged. The following nine chapters are devoted entirely to inspection, but are so interspersed with illustrations and short descriptions of various abnormalities to be looked for in each minute part of the body, that the reader's attention is held and the real value of inspection in physical examination is appreciated.

Various diagnostic aids such as thoracentesis, spinal puncture, radiology, and especially electrocardiography are described in some detail. These are not strictly to be included in the term physical diagnosis. However, they are presented here as adjuncts to physical diagnosis and seem rather to emphasize physical diagnosis than to eclipse it. The latter is

an all too common tendency of the present day.

This work should find a useful place on the desks of internists, practitioners and medical students alike.

Methods of Treatment. By Logan Clendening, M. D., Clinical Professor of Medicine, University of Kansas. Fifth Edition. Pp. 879, with 102 illustrations. Cloth. Price, \$10.00. St. Louis: C. V. Mosby Company, 1935.

The compilation of the book is extremely good. It is exceptionally classified, well written and up to date in every particular.

Space does not permit a report on the individual merits of each chapter, but the book contains a rich store of material for reference and advances the latest in symptomatology, diagnosis and treatment. The reviewer has referred frequently to this book, never failing to find constructive suggestions.

Particular attention must be called to the chapter on drugs, where the pharmacology and therapeutic application renders the work indispensable for reference. Again, the chapter on dietetics, which is free from theories, gives to the principles of nutrition their practical application in clinical medicine. To the practitioner whose disappointment has been keen at his inability to obtain better results in the development of the work in the ductless glands, in which he knows there are tremendous possibilities, Doctor Clendening's chapter on endocrinology is a source of encouragement, a complete analysis of results already obtained, what may be hoped for in the near future through scientific experimentation, and a frank and clear warning to leave alone those theories not completely proven.

For the value of its assistance to the general practitioner, this monograph by Doctor Clendening is heartily recommended.

How to Practice Medicine: By Henry W. Kemp, M. D. Pp. 156. Cloth. Price, \$3.00. New York: Paul B. Hoeber, Inc., 1935.

This manual of advice to graduates beginning to practice covers the territory all the way from equipping and opening an office to geriatrics. The advice generally is good, even if a bit dogmatic in spots. Our most serious objection is to the author's contumely (chapter VIII) of the medical society that permits its members to read papers before it. The style is entertaining.

Modern Motherhood. By Claude Edwin Heaton, M. D. Pp. 271. Cloth. Price, \$2.00. New York: Farrar and Rinehart, Inc., 1935.

The author succeeds very admirably in writing a text book on obstetrics for the laity. He treats the subject fairly and does it in such a manner that it can be easily understood by the lay mind. Beginning with pregnancy and its complications, a chapter is devoted to prenatal care, including discussions of diets and vitamins. Other chapters are devoted to labor and its complications, operative obstetrics, obstetric anesthesia and of analgesia, care of new borns, and the puerperium. A large portion of the book is devoted to the anatomy and physiology of the female reproductive organs, also embryology and socio-biologic theories of heredity, with explanation of the Mendelian law. He gives advice on how to choose intelligently a physician for maternity care. Home versus hospital care in confinement, and obstetrical statistics are very ably discussed. A brief resume of obstetrical history generally, and American obstetrical history in particular, is also included.

The book contains a vast amount of authentic obstetrical information, so that prospective parents may be well informed in order that they may be able to avail themselves of the advantages of modern obstetrical practice. All prospective parents should be urged to read this book. It makes excellent extra-curricular reading for nurses' training schools.

Human Anatomy: Double Dissection Method. By Dudley J. Norton, M. D., Associate Professor of Anatomy, Columbia University. Two vols., pp. 560: illustrated. Cloth. Price \$6.00. New York: Columbia University Press, 1934.

Dr. Morton's two volumes represent his new system of teaching anatomy so that the student may get a comprehensive idea of the subject in one year of about 360 hours. Two dissections are done, the first covering only the larger structures and giving a bird's eye view of the whole body. The second dissection covers the finer morphology, and requires no additional cadavers. We are impressed with the system, and have no doubt it will find wide acceptance. An otherwise grinding subject is more popular with the students, who, following this method have done exceptionally well before the state boards.

Good Food at Low Cost. By R. T. Devereaux, M. D., Pediatrician, Chester County Hospital. Pp. 38. Paper. Price, 25 cents. West Chester: Chester County Medical Society, 1934.

This little brochure is an excellent presentation, for the layman, of the omnipresent problem of making the food dollar go the furthest. We congratulate our neighboring Society on its successful venture.

Observations of a General Practitioner: By William N. Macartney, M. D. Pp. 478. Cloth. Boston: Richard G. Badger, 1932.

One's opinions are always open to criticism, for the reason that they do not coincide with others.

Therefore, those whose opinions coincide with the author's, will find this book enjoyable reading.

The Romance of Exploration. Pp. 160. Cloth. New York: Burroughs Welcome & Company, 1934.

This booklet is a brief resume of the modern explorers, chiefly from Stanley to Byrd, and stresses the value of proper medical equipment on such enterprises. It affords a very pleasant evening's reading.

Effect of Atherosclerotic Plaques on Diameter of Lumen of Coronary Arteries

James D. Stewart, Eugene Birchwood and H. Gideon Wells, Chicago (*Journal A. M. A.*, March 2, 1935), examined a small series of hearts to determine the relation between the size of the lumen of the coronary arteries at the site of atherosclerotic plaques, as seen in the collapsed artery in the usual postmortem examination, and the true size of the lumen when the artery is distended by the usual blood pressure. The results indicate that coronary arteries exhibiting many atherosclerotic plaques which, as seen at postmortem examination seem to cause marked local constrictions, may, when distended by the usual blood pressure, possess a fairly uniform lumen without evidence of constriction. Apparently the atherosclerotic plaques in coronary arteries do not necessarily protrude into the lumen during life, and the apparent narrowings seen in the dead body may not have existed during life.

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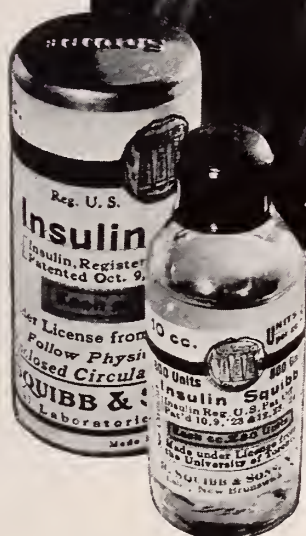
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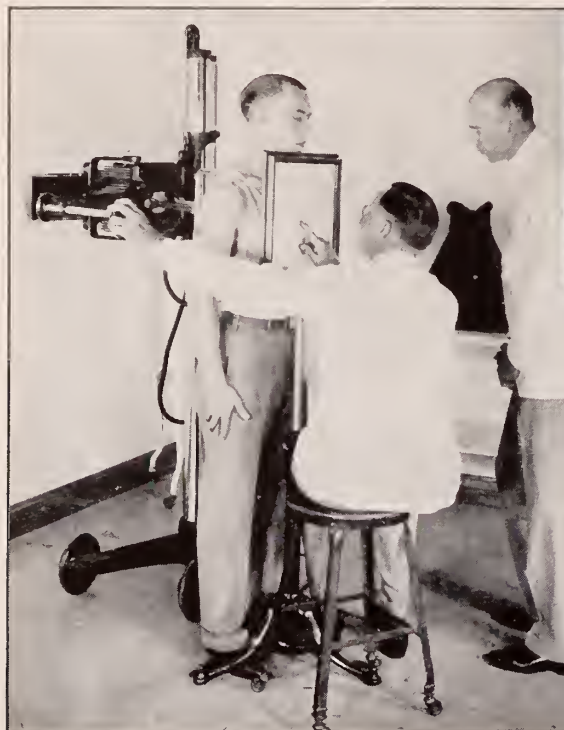
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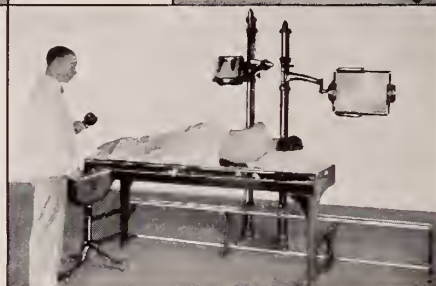
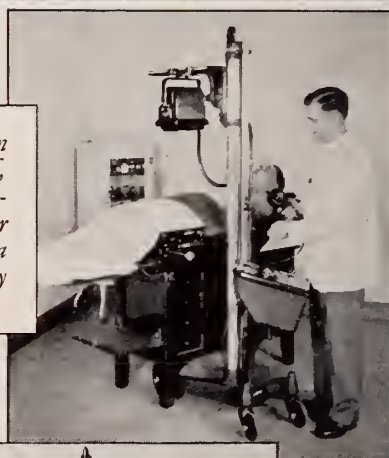
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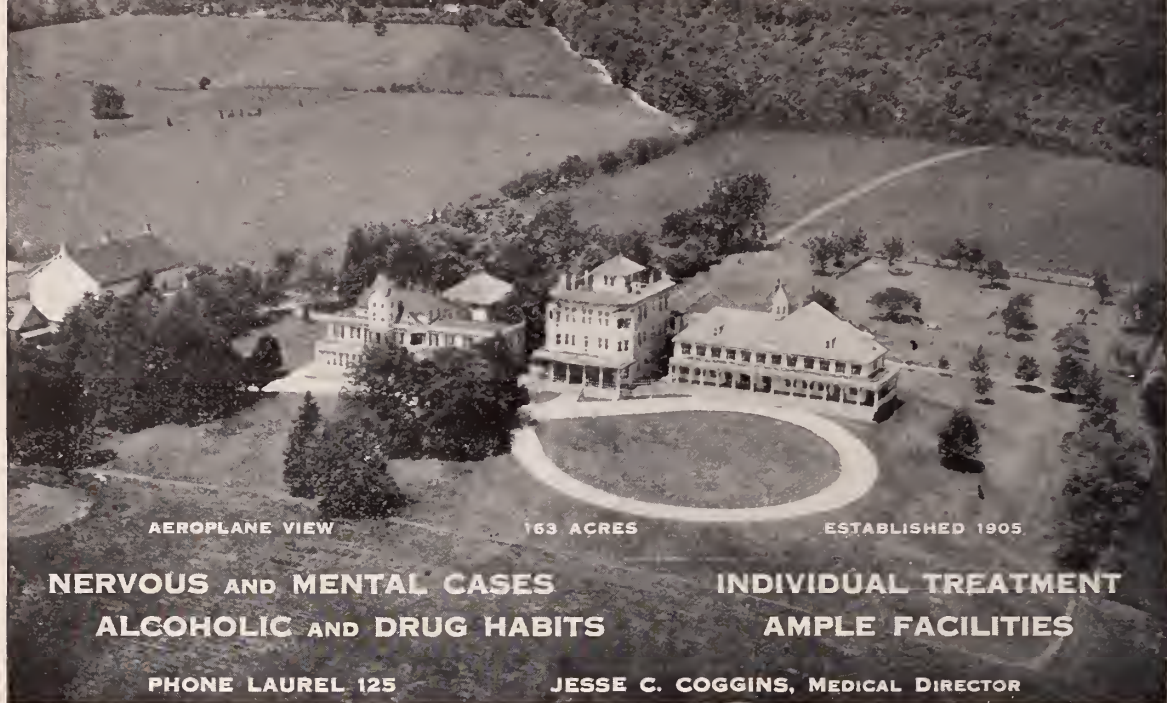
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# DELAWARE STATE MEDICAL JOURNAL

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## FEAR

M. A. TARUMIANZ, M. D.

*Superintendent of the Delaware State Hospital*

Fear, one of the most intense emotions experienced by all animal life, may or may not be considered normal in its aspect, depending upon the intensity and direction which it takes. Should we consider emotions normal only when they produce a feeling of harmony and well-being in the individual, then we must consider fear as well as many other emotions from which individuals at times suffer, as definitely abnormal. It is true that a sensation which works against the well-being of the individual tends towards abnormality of behavior, and may in this way be considered as detrimental to life adjustment. However, should we consider that emotions are also normal, if they work towards the preservation of that individual, even if such an emotion is accompanied by a definite feeling of unrest and rebellion, then we must realize that fear is an essential, and if essential, a normal component of emotional life.

Of all desires of man, that of prolonging life takes the foremost place, and science spends its best efforts to do so. Self-preservation is the most vital aspect of the individual's existence and thus may be considered one of the basic instincts which is found in the animal mechanism. It precedes preservation of the family or social group, or continuance of life by means of propagation. Destruction of self to save others is a refinement of civilization which often breaks under severe emotional stress, either through a direct defying of all social standards or through a more subtle means which may be acceptable to society and yet protect the individual as is witnessed in the neuroses. Fear is the major emotional ally to self-preserva-

tion since it prevents the individual from entering into unnecessary danger. Uncertainty as to the outcome of the unknown or unexperienced with its accompanying fear of failure or injury to self causes man to enter any new situation with caution necessary for acceptable adjustment. It is engendered by unsatisfactory and painful previous experience preventing the organism from again entering a situation which will tend to have similar results. It may be vicariously obtained through the observance of the effects of certain happenings on others, thus causing the individual to avoid certain objects or situations which have had adverse results on others.

Fear, as an emotion, is caused by a combination of sensations, probably predominantly visceral in character. The first reaction is perhaps psychic in nature, based on the mental reaction of the individual towards the situation or object which is capable of arousing this particular emotion. The emotion thus aroused reacts on the physiology of the subject so that the visceral sensations assume the major role. There is often a primary momentary paralysis followed by an over-activity as nature attempts to give the organism power to overcome the object which is striking at the safety of the individual. What may be considered a primary fear reaction found early in infancy is aroused only by factors which threaten the physical security of that individual, such as suddenly dropping the individual from a short distance or producing an unexpected, intense noise. The feeling of insecurity resulting causes the organism to put forth all of its efforts to regain the sensation of security which is so essential to physical well being. Since probably the only normal instinctive fear is that which is aroused pure-

ly to protect the physical safety of the individual, we must consider as abnormal those finer ramifications of fear which harass the human organism of our modern civilized times and which often lead to destruction of that organism through perverse means, since nature has provided no instinctive reaction to such abnormal fears, and the ability to cope with them must be acquired during the life of the individual causing a much finer type of reaction. The normal fear with as its object the protection of the physical element without the added abnormal fear of the opinion of the group, never leads to neuroses or psychoses, but simply carries out its purpose after which it subsides.

We will dismiss, now, the essential fear reaction and discuss the other types of fear resulting from the processes of civilization and the refinements of our life and which are often at variance with the fundamental emotion. These abnormal fears from which all individuals suffer, some constantly and others at intervals, have, in the majority of cases, their foundations in infancy or early childhood. Since the actual event or experience which caused the permanent fear reaction is often forgotten, the individual is unable to explain why he reacts in this manner to certain happenings while others do not. The child of three or four who is left alone in a room during the time in which an unusually severe storm is raging may, although never having suffered fear during slighter storms, develop a definite fear reaction towards all storms no matter how slight in nature. As he reaches adulthood the fear may seem to him to be ridiculous, although uncontrollable, yet he has long forgotten the incident which started it. We have in this case an actual terrifying experience which has produced in the individual a reaction which hampers his enjoyment of life to a mild extent. We have only a direct reaction towards a terrifying experience but an indirect reaction may also occur. Suppose a very young child, unable to reason, should be playing with a new toy at the time of the terrifying experience. This toy may become connected in the child's mind so closely with the frightening incident that he

will not only be afraid of the storm but also of that toy or similar ones. In the case of the toy the fear will disappear when the individual reaches an age of reasoning, but a definite aversion may remain because of the association with an unpleasant incident. The parent who unwisely stresses the concept of failure and fear rather than that of success and satisfaction may produce a psychic fear in the individual which may hamper success. An individual may be presented to society in whom the emotion of fear is constantly present, a fear of failure, thus hampering his own efficiency, since his efforts are hindered by an abnormal emotional reaction and mental unrest. His strivings become negative rather than positive in character since he strives to satisfy rather than to excel.

Fear is also associated with sudden change from the accustomed situation of life, as witnessed by a fear of a loss of social position, fear of a loss of material wealth, etc. Also as in early life the child is taught to fear the parent so he may carry on indefinitely a feeling of fear towards the one in authority who may play in later life the role of the parent. The child may first fear the teacher, then the employer, etc.

This fear in the normal physical and intellectual individual, who has as an important component of his mental mechanism the will to power, produces a conflict which absorbs a certain amount of mental energy; thus leaving less for the intelligent fulfillment of daily life activities. Fear in the mentally defective does not seem to play such an important role in the adjustment of the individual, possibly because with a lowering of intellectual development there is frequently a lowering of emotional drives making acute conflicts incapable of developing. General psychiatry in considering the etiology of the neuroses and the psychoses and the other maladjustments accepts not only one type of mental conflict as being of extreme importance, but considers all types. Since it is felt that self-preservation is of prime importance in the individual's make-up, and since fear is closely associated with the instinct of preservation, it will undoubtedly be true that a great percentage of

mental maladjustments are due to factors in which fear plays the most important role. It would seem, undoubtedly, that the war neuroses were based on a mechanism in which this emotion was foremost. A conflict in these cases would seem to be quite readily demonstrated since the man forced into battle inherently not a coward and wishing to live up to what society expects of him, but yet being almost overpowered by a supreme fear since his very life was at stake, would develop a conflict of a major type. As is undoubtedly true, mental conflicts which must be hidden either because of early training or social or civilized standards, cause an excess of mental energy which must be released. The only escape for the individual would be in the development of some type of neuroses which would satisfy both the fear, which is predominating, and standards which society demands. In this case we have developed either a mental or physical illness, entirely psychic in nature, which prevents that individual from going into battle and which also satisfies society since he is incapacitated from doing so. In this way an adjustment follows. One, it is true, also has been made, so that the physical and mental status in which the individual finds himself in his neuroses has released the mental conflict which was present. Whether the individual develops an actual psychosis, depends upon his own personality type and upon how great the demand is for release. A functional psychosis, particularly one of the more malignant types, is undoubtedly a complete and final escape from reality. The need of escaping from reality is based on a fear that the individual will be unable to face it satisfactorily.

The fear evoked in the child by the parent, going on to fear of the teacher in the school, carried on through adulthood into the more complex aspects of life, eventually develops into a fear of public opinion. The type which is expressed here is variable, depending upon the environment in which the individual was raised and in which he finds himself in adult life. The highest criterion is the opinion of the group in which the human organism finds himself. This fear of

the opinion of the group is evident in the history of savage races and as far back as when group life was instituted as a means of protection against forces which the individual could not overcome by himself. Through the processes of civilization and socialization, the standards have become more severe with many aspects not dependent upon the primary aspects of life. Not only physical and mental prowess have been considered of prime importance, but material and social standards have almost taken first place. In our rather unhealthy social life, loss of position or fortune has almost become of greater significance than the loss of physical health or integrity. The loss, of course, is variable depending upon the social group in which the individual finds himself at the time that the fear of the loss occurs. In democratic countries the problem becomes of greater importance since a person can so readily rise from one social strata to another. The individual becomes accustomed to satisfy his desire for will to power in this rather vicarious manner, and since the position which he obtains is more or less precarious, the fear of losing this position becomes greater. As a social system tends to become such that an inevitable leveling of position occurs or an ultimate return of a monarchy seems probable, there is aroused almost a universal fear based on the realization that a change of social and economic standards is imminent. It is witnessed already by the rapidly increasing number of neuroses which come to private physicians, clinics, and mental hospitals during our present social upheaval. The neuroses in these cases are not based on the same mechanism which occurs in the more fundamental cases, where life preservation is at stake. They are of a more subtle type, in which the individual will not admit to himself that it is fear of financial or social power which caused the difficulty. It is merely an inhibition of the actual fear which is present. The refusal to recognize fear with its rather overpowering emotional experiences or to substitute for it a neurosis would tend to develop a psychosis as a complete escape from the uncomfortable sensation should the in-



dividual possess an inherent mental weakness.

It is customarily believed that fear produces only a cowardly type of individual—particularly in children. Quite to the contrary, we often see developed an antagonistic reaction, based on the fact that even in children the ego attempts to maintain its supreme position. In doing so, it may outwardly fight that which is attacking this position, and produce an attitude of extreme rebellion in an attempt to establish confidence in itself.

There have been many movements to abolish fear in the human race. Some of these movements in themselves have not definitely faced the situation that they are for this purpose. Religion is probably the first which was developed. As previously demonstrated, the desire to live or the preservation of the individual's own life is primarily the most important aspect of life as a whole. Death has an element of mystery about it which is and always has been unexplainable. It has been something over which the organism has had no control. It is the unknown factor in life which must be faced. For this reason, there is a certain amount of fear connected with it, and in an attempt to alleviate the unpleasant emotion, the savage races developed certain theories or beliefs in an attempt to explain to themselves satisfactorily the outcome of this unknown factor. The ultimate result is the removal of fear by replacing it with a feeling of confidence.

Undoubtedly, all religions, no matter whether they be ancestral worship, sun worship, or what-not, result in the same ultimate good towards mankind since they release an abnormal conflict, replacing it by a feeling of confidence and leaving the individual freer to carry on the other functions of life. It also tends to bring about normal behavior and social adjustment since it releases this one great conflict and prevents the necessity of abnormal behavior to release the energy which might develop because of the conflict present.

Psychiatry plays somewhat the same mechanism, but we must attack the problem

after the damage has been created. Religion substitutes security for fear; psychiatry explains the fear to the individual and attempts, through this explanation, possibly to completely remove the cause, or to teach the individual to face it so that he will not seek release in mental disease. Mental hygiene attempts to prevent the development of this more or less abnormal reaction through teaching means of preventing conflicts in children, through attempting to develop normally the emotional life of the individual, to substitute various interests and activities for the fears which have developed early, and thus prevent the child from having a serious mental conflict in later life. It attempts to show that incomplete explanation of situations develops reactions of insecurity and refusal to face problems as they arise has a detrimental effect on the human organism.

Since the human race does not fear that to which it is accustomed, a cure from certain fear may result if the individual faces that of which he is afraid. After repeatedly facing the situation, he finds that no harm has resulted to himself, the fear loses its poignancy. However, should this fear be based on conditioning of the individual, such as was described before in which the child became afraid of a certain toy, he may be able to control the fear of the primary cause, but not having his aversion or fear towards that particular object towards which he was conditioned explained, he is unable to control the reaction until such a time when he understands clearly the reason for this reaction. It is, therefore, important that if a child is conditioned to a certain object at any time that he be reconditioned early in life. Namely, that object should be placed before the child under pleasant or agreeable sensations, so that these agreeable sensation will overcome the one supreme disagreeable sensation. Fears of this type, it is true, are seldom incapacitating to any great extent. Since, as a rule, they are too trivial to play an important part in the life of the individual, they cause a slight discomfort. However, they may prevent a person from certain contacts or may place him

in disagreeable situations at such frequent intervals that we find in them the cause of certain personality types. Undoubtedly, except for the fear engendered by the instinct of self-preservation which is normal in the mental make-up of the human organism, and which is essential to keep the individual alive, we find that acquired fears are dangerous; and although they do not strike at the physical life of the individual, they do at his mental health and may cause what is practically a mental death. For this reason they do much towards producing inefficiency in life, as well as increasing commitments to institutions. Proper and intelligent training early in life can do much to prevent or alleviate such fears, a task which is difficult after adulthood has been reached. Thus we have the control of fear as one of the essential aspects of preventive psychiatry.

### ECONOMIC AND POPULATION SITUATION AT THE DELAWARE STATE HOSPITAL AT FARNHURST

DR. PERSIS F. ELFELD, M. D.

Assistant Superintendent and Clinical Director of the  
Mental Hygiene Clinic

The effect which the economic depression of 1929 placed upon the Delaware State Hospital has been of rather far-reaching importance, the major part of which is probably being felt at the present time. Although this is not the first depression through which the institution has lived, it seems to be the first which has apparently shown a major effect on its welfare.

Up to the year of 1889, the insane of the State of Delaware were cared for in the county almshouses, since there was no provision made for a separate institution. Consequently they received none of the special care which was necessary to effect a recovery.

In the year of 1889, the Delaware State Hospital was opened, the property being acquired from the New Castle County Poor House. One hundred and nineteen patients were sent to the hospital in this year, most of them being transferred from the other institutions. The institution consisted of one building large enough to house 210 patients.

As was characteristic at this time in all States, the institution was not considered as a hospital where treatment would be carried out, and where there was hope of recovery, but was more a place of detention to care for those people who were not safe to be at large or had no family to care for them.

After the initial admission of 119 patients, there was a tendency for a decrease in yearly admissions until the low point was reached in approximately 1897, at which time only 83 patients were brought to the hospital. In the year 1898 there was a sudden rise, which can be accounted for by the economic condition, following which there was another sudden drop until 1900, since which time there has been a general tendency to increase, beginning with 1908, with its peak at 1910. At this time 135 patients were admitted. This increase followed shortly after a minor economic depression. In 1916, the highest point of admissions up to this time was reached, when 150 patients were admitted. This was followed by another general decrease until the year of 1921, when again only 101 patients came into the hospital. From this second low point we have a steady increase to the year of 1924 with 167 patients coming into the hospital, which point was not again reached until 1927 and 1928. In the year 1928, we have the onset of a very marked rise in admissions until the year 1933, at which time 354 patients—more than double that of the highest point in 1916, were committed. This number far exceeded the estimated population on the increase based on the population since 1898. In the estimated population there should have been in the hospital approximately 740 patients; whereas, the actual population was 859—over 100 more than the estimated increase.

On July 1, 1934 (date on which the last estimate was made), there were in the State Hospital an average resident population of 905, which corresponds well with the estimation based on the increase of 1929 and 1930 but exceeding an estimation based on the increase since 1889 of 153. The estimation for that time approximated 752 patients. We find the increase in resident population is

now tending to average more than double, or 70 to 90 more patients per year. At the rate of increase which we are experiencing now, in 1950 there will be approximately 1850 patients resident in the State Hospital. In 1940, or five years from today, there will be approximately 1270 resident patients in the hospital at all times. We will later explain the inability of the institution to care for these patients unless some important action on the part of the public is taken.

It is interesting to compare the daily per capita cost. In 1889 and 1890 the per capita cost per week was \$3.25. This decreased in 1894 to \$2.95, being entirely possible because of the equipment necessary when the hospital was opened in 1889. Following this there was a gradual rise, and in 1902, the per capita per week was \$4.00 (not including permanent improvements), occurring at the time when the economic situation was such that the dollar was at fairly low value. There was then a rapid decrease until 1904, when the per capita was about \$2.94 (without permanent improvements). After this, there was a gradual rise until the year 1916, when the cost was about \$3.50 (not including permanent improvements). At this time we find an area of abnormal cost, and the per capita went up reaching its highest in 1924, at which time it was \$6.00 (not including permanent improvements). The year of 1930 we find an increase to \$8.73. In 1932 we again have a rise to \$8.17 (not including permanent improvements), and \$10.15 (including permanent improvements), due to a period of improvement and construction and need of equipment caused by the unexpected increase in population. Following the year 1932, the effect of depression was noted by the decrease in prices until a low was reached in 1934 of \$6.93 (not including permanent improvements) per capita per week. At this time there was but little improvement carried on because of lack of funds, but later in 1934, the general tendency for increase in prices with the lowering of the economic value of the dollar was noted. In 1894, when we had our first division of expenditures into definite departments, we find that salaries and wages were \$.80 with a lowering

from 1896 to \$.66 per patient per week.

As the community and institution gradually realized that a hospital for the insane was not a home for detention, and that it was more than necessary to employ guards to watch patients, with a certain amount of food placed before them three times a day, there has been a steady increase up to the present time, at which time the per capita cost per week for salaries and wages is \$3.70. The necessity for keeping records, of patients' surgical treatment, hydrotherapy and nursing care was considered non-essential. These departments have all been added to the hospital. Moreover, with the increase in population and the growth of the institution, it was necessary to enlarge the mechanical and engineering departments of the hospital, which naturally also fell in the classification of salaries and wages. Maintenance carried on a steady increase with several lows due to undoubted economic conditions. By maintenance we mean fuel, food and clothing, until its height in 1928 of \$4.64, more than double at the time of the opening of the institution, after which it began to decrease until low was reached in 1934. The per capita was then \$3.24, which can be explained by the decrease in prices after the depression of 1929, and as stated before, is now swinging upward again rather markedly, due to inflationary tendencies of the dollar. Repairs have been a minor part as well as equipment. There have been one or two high peaks, followed by low, which is to be expected as the buildings constantly need repair and as equipment must be replaced. There was a lowering of the cost in the last four years, but this was not due to the fact that repairs were not made or equipment not purchased, but only due to a lowering of the prices. These two departments are also feeling the effect of the increase in prices which is occurring at the present time.

It is interesting to note in charting the admissions and discharges, that there has been a tendency for the two to parallel each other, but with a gradual widening in the last six years when we find that although discharges have increased, they have not in-



creased comparatively to such a great extent as the admissions. This is based on two reasons; one, that the increase of admissions was particularly caused by the fact that many families, who were moderately secure economically, kept their relatives who were suffering from a minor degree of mental difficulty, in the home as long as they were able to handle the added expense. With the decrease of funds in the family, these cases were committed to the State Hospital, causing a marked effect on the rate of admission. Discharges were not made as readily from the State Hospital during these years because the financial difficulty within the family group made it impossible for the patient to adjust at home, and it was necessary to keep him in the State Hospital for a longer time until recovery became more absolute so that he would be able to withstand the emotional tension due to the economic strain in the group. Also, the impossibility of re-employing former patients of the State Hospital during times of economic depression made it necessary to retain patients who would otherwise be forced on the streets.

It would be informative to consider the receipts from the paid patients. For the two years ending June 30, 1918, in which the receipts were higher than in any previous two years, about \$32,000 were received by the State Hospital. From this time there has been a gradual increase until we find that during the two years ending June 30, 1934, over \$109,000 were received. This undoubtedly has helped in the care of the patients since the Legislature has at no time been able to appropriate sufficient funds to maintain the patients in an accepted manner, even when prices were at the lowest point.

During the last few years three new units, excluding the Observation Clinic, have been added to the State Hospital, namely, Continued Treatment Building, with a capacity of 66 and housing 66 patients; Re-Educational Building, with a capacity of 95 and housing 95 patients, and the North East Wing of the New Castle Building, with a capacity of 81 patients and housing 81. These buildings are not overcrowded in any way, and we find that the adjustments made

by the patients are very satisfactory. Here they live a life as nearly natural as it is possible to produce in an institution. When it comes to the older sections of the institution, we find that an entirely different picture predominates. The Main Building has a capacity of 150 patients, with an actual residence of 282 patients including 49 beds in the basement. The Annex to the building has a capacity of 150 beds, with an actual population of 182 patients. The Swift Building was built to accommodate 110 patients but has 160 living on the wards. Black Cottage, equipped for 91 patients, has 117 at the present time.

In many of these places the beds are so closely placed that it is necessary to push the beds apart in order that the patient may go to bed. This naturally results in more confusion and ultimate hindrance towards the recovery of the patient. It is impossible to isolate those who are very disturbed, and it is necessary to restrain them to protect others on the ward, a condition which is a throwback in the care of psychotic patients, and a great hindrance to their recovery. Moreover, under such conditions these patients are more disturbed than they would naturally be, and the loss to the hospital because of destruction is greater.

From a sanitary viewpoint, we must also consider that the plumbing of these buildings is not sufficient to care for the excess, and even the matter of ventilation is a problem. At the present time, in totaling these results, we find that the institution has a capacity of 783 (including the Observation Clinic), with an actual residence of 1,023 (including Observation Clinic)—an excess of 240. By the end of the next two years, or by the year ending June 30, 1937, calculating the increase of population at the present rate, there will be approximately 1,150 patients in the hospital, or an excess of 367 patients.

Since the institution is already placing beds in corridors, using day halls, and depriving patients of necessary comforts, it would be impossible to accommodate more patients than there are in the institution at present. Some of the basement space, where

there is very little sun, and no proper water supply, is already being used. Unless some radical work is done, it will be impossible to admit any more patients to the State Hospital with its present means of caring for them.

Recently the State acquired the New Castle County Hospital, one wing of which has been remodeled to make it fit for the care of psychotic patients. Were it possible to remodel the rest of the building, the institution would be able to care for 220 more patients than it does at the present time. However, the building as it stands is useless except for the remodeled portion, and must be heated to prevent further deterioration. To remodel this building is no small item. The old fire escapes are of the type which could not be used for mentally ill people, so that it would have to be equipped throughout with new ones. The heating system, as well as plumbing, are in such condition that they cannot be used, unless they are repaired. The plaster is falling down in many places, and in others the floor is in wretched condition. The staircases are unprotected, making them unsafe for psychotics, particularly those with suicidal intent. The windows must be barred throughout, no small matter in itself. The roof must be repaired since there are many leaks present. For this work the Legislature has appropriated the sum of \$33,000, barely enough to care for one of these items were the entire building to be remodeled, to repair it in a temporary way would be false economy since this work would all have to be repeated as a permanent plan within a few years. To remodel the building in a way which would meet with the approved standards for a mental institution would cost approximately \$195,000, and to equip the same would cost \$20,000 a total of \$215,000.

Because of the physical handicap which is present in the main hospital to care for the patients properly, and because of the severe overcrowding, it has been impossible to give the proper treatment. For this reason, the institution has been unable to effect the cure as quickly as normally would be expected. Therefore, discharges are decreased, which adds to the permanent resident population.

At the present time there are around 400 patients who are chronically insane, with very little chance of recovery, and about 623 who have a fairly good chance of adjusting in the community should they receive the proper treatment. Should the conditions continue as they are and the tendency of returning to the old asylum method continue because of lack of facilities, we will find a rather sad picture. At present, of the 400 who are chronically insane, the majority are patients who have been in the institution for many years before the standards of the State Hospital were improved and before it was realized that insanity was, in the majority of instances, a curable condition, or one in which satisfactory improvement could be made. Should we be forced to continue as we are at the present time, there would not be 400 chronically ill but 600 patients who would spend from 15 to 30 years of their lives in a State institution at the expense of the State. This will eventually cost hundreds of thousands of dollars to the State. But of greater importance is the humanitarian view, for as we are, we are depriving individuals of a chance of normal life and liberty—a condition just as deplorable as if we would allow the physically ill to be without proper care and medication in our general hospitals, something which the public would not tolerate. These people are no more responsible for their mental illness than those who suffer from physical illness, and they therefore deserve the same care and treatment. Wards in a general hospital with beds so closely placed together that no one could pass between, would not be tolerated, and hospital authorities would refuse to accept more patients than they could handle from a humanitarian viewpoint as well as for the fact that this would react unfavorably towards their home institution. The personnel of the hospital would be unable to give the proper treatment; the sanitary conditions would be objectionable, and the public would rapidly voice its disapproval of such a situation. However, the physically ill can, in many cases, be cared for in the home quite adequately. The mentally ill have very little chance of recovery in the home, and in



many cases it is impossible to ever consider such action. Their only hope is the State Hospital, and it is primarily the medical profession's duty to keep this a hope and not allow a State hospital to become a place in which these ill people will be incarcerated for many years of their lives. Should this occur, it would seem that those who are so diseased should at least have the necessities of life to give them as much satisfaction and contentment as is possible.

Should the public see the pleasure and the change of reaction which occurs in a patient when it is possible to transfer him to a ward in which modern facilities are present, and could they see the improvement in these persons' conditions, they would not be long in demanding that all who enter an institution for psychotics should have these facilities. Complete deterioration is rarely a necessary outcome of insanity if a patient is given proper treatment. The majority of them can, at the very least, be so treated that they will make a fairly satisfactory adjustment, the majority in the community and the rest in the institution; but for those who completely deteriorate due to the lack of facilities, there is very little that can be done except re-education in habits so that they will automatically go through certain actions every day in a machine-like fashion.

### ALCOHOLIC PSYCHOSES

JOHN W. BALLARD, M. D.

First Assistant of Delaware State Hospital

The writer disclaims any new knowledge of the subject of this article and any personal knowledge is retrospective. We will attempt to interest the reader by a resume of the present classification with a description of the different types, symptoms, treatment used, and ending with some interesting tables compiled from the hospital files.

It has been said that twelve to fifteen per cent of the psychoses are dependent upon alcohol as the principal cause. Just how true this may be is debatable, because it is not known how alcohol brings about the results—that is, whether it is primarily the alcohol which is to blame or secondarily the metabolic disturbances produced by it. The most important consideration in the estimation of

most authorities is the individual psychology. When the individual is confronted by situations to which he cannot readily adjust, one of the ways he reacts is to withdraw from the whole situation by stultifying himself with alcohol. It must be remembered also that other psychoses are often ushered in by indulgence in alcoholic beverages. Manic-depressive, dementia praecox and general paresis frequently give a history of alcohol in the early stages.

It should be borne in mind that an alcoholic psychosis is practically never the result of a single period of inebriety. It occurs only in those who habitually use alcohol over a varying period of time; in short, among the chronic alcoholics. By chronic alcoholism it being understood that it does not necessarily mean habitual intoxication but especially includes those who drink more or less steadily in what they consider moderation, and those periodical alcoholics with whom we are all more or less acquainted.

The symptoms of chronic alcoholism may be divided into the psychic symptoms and the physical. Under the first category we find that intellectual activity and capacity for work are diminished and the patient becomes eventually rather dull and negligent. The judgment is affected, the patient realizing but imperfectly his condition and the significance of his acts. There are disorders of memory that are slowly progressive, with a destruction of past impressions and an anterograde amnesia which renders it difficult for him to acquire new impressions. Irritability and impulsive tendencies associated with a moral atrophy are usually present sooner or later, which renders the patient indifferent to his responsibilities. The physical symptoms are shown first as they affect the nervous system with the various disturbances of sensation such as amblyopia and the paresthesias and in the motor realm there is a general enfeeblement with tremors and possibly epileptiform attacks. Gastro-intestinal symptoms as manifested by anorexia, painful digestion and constipation are present.

The classification of alcoholic psychoses in general use is that adopted by the American Psychiatric Association. First, we have pathological intoxication under which are those cases which show as a result of either



small or large amounts of alcohol, sudden excitation or twilight states and a marked emotional reaction, particularly anxiety or rage. Such an attack may last a few minutes or several hours.

The writer is unable to present a case of pathological intoxication from the hospital files which is not so strange as it may seem. Since the duration is usually only a very few hours most of these cases either recover at home or are sent to a general hospital, the latter being usually diagnosed as acute alcoholism.

Second, is delirium tremens with usually a sudden onset, although frequently preceded by premonitory symptoms, such as nightmares, uneasiness and violent headaches. When the actual attack starts the illusions and hallucinations are painful and are combined in such a manner as to form complete scenes in an imaginary and fantastic world. At the same time that the patient has visions of assassins or ferocious and horrible animals, he feels their blows, bites, or their revolting contact. The hallucinations are like a dream in action and the patient can often be momentarily aroused from his delirium by a sudden question and it is possible to secure correct responses, but as soon as left alone he relapses again into his delirium and motor excitement. From the hospital files we select the case of R. R. (col.) as an example of delirium tremens. Physical examination showed patient was in the best of health. No pathology present except absence of the deep reflexes. The social history stated that he had been drinking since the age of 16 becoming drunk once a week or oftener; age on admission 32. For the three weeks before admission had been drunk practically every day. He stated that the night before admission at the State Hospital that he had seen black cats and rats in his room and then a woman came into his room and started to talk about the devil; men with pistols followed this woman and tried to shoot him. The bulls and bulldogs were after him and he then sought a barn and tried to hide from his persecutors by barrieking the door. But the barn was full of black faces and there were pistols suspended over his head. In terror he shouted for help and finally the police came and placed him in a cell.

The day after admission the patient was almost entirely recovered from his delirium and appeared fairly clear mentally.

Third, is Korsakoff's Psychosis, which is an affection characterized by the association of the phenomena of polyneuritis with certain mental disturbances among which amnesia of diverse forms constitutes a preponderant feature. Korsakoff's disease appears most frequently on a basis of chronic alcoholism. The symptoms may appear gradually, but as a rule the onset is rather sudden with agitation, hallucinations and anxiety, much as are present in delirium tremens. After several days the agitation usually becomes less, but the disorientation remains and the characteristic amnesia appears, accompanied by a polyneuritis. The polyneuritis may be very mild or severe, with paresis of the lower extremities, paraesthesias and hyperesthesias, and abolition of the tendon reflexes. Cardiac disturbances are common and at times a fatal cachexia develops. The prognosis in these cases is frequently poor but many partially, if not wholly, recover. As an example of this type D. A. (col.) gave a history of chronic alcoholism extending over many years and had been intoxicated about five weeks previous to admission. It was stated that five weeks prior to his commitment to the State Hospital he began to act queerly and talk out of his head. His condition gradually grew worse. When roused from sleep would seem confused and disoriented for a time and this confusion rapidly increased until he became frequently incoherent. Gait became impaired and finally he apparently developed a motor paralysis of the lower extremities becoming unable to walk. Pressure over nerve trunks was very painful. Patient's memory was very much impaired at first particularly for recent events. He fabricated freely and exhibited no insight. Declared there was nothing wrong with him and that he was unable to walk because of rheumatism. Patellar reflexes were sluggish and pupils reacted somewhat slowly to light. Blood Wassermann was positive but lumbar puncture on two occasions was negative. He was started on the usual treatment for Korsakoff's plus anti-huetic treatment. About three weeks after admission he began to essay a few steps about the ward. The paresis of the lower

extremities gradually left him and he grew much more clear mentally, becoming coherent and relevant but still had a tendency to fabricate. Was paroled eight months after admission. Gait was practically normal and he was mentally much improved with good grasp and contact with his surroundings.

Fourth, we have the type known as acute hallucinosis, perhaps the commonest type met with in the mental hospital. This differs from delirium tremens in that the auditory hallucinations predominate over the visual, there is no loss of consciousness though there may be brief periods of considerable confusion and its course is of a longer duration. The symptoms of chronic alcoholism are accentuated, the patient becomes uneasy and suspicious. He develops a feeling that he is being watched and then he hears threatening voices and has frightful visions, and in this latter state frequently seeks police protection. He sometimes becomes very aggressive and wreaks his vengeance on innocent people, being determined to protect himself, and may become very destructive to furniture and clothing. If this type of patient expresses a desire to die it is not from remorse but from a wish to escape from his imaginary enemies or the torture he thinks is in prospect for him. Often he will refuse to eat or drink for fear of poison. As a first example of this type take the case of S. B. (col.), a single man of 25, always had good health and good habits until six years previously when he began to run around with a woman of low moral standards. He started to drink heavily and became intoxicated about once a week. About three months previous to admission after two days of hard drinking, he had a series of epileptiform convulsions. Mentally normal afterwards. Four days before admission after drinking all day he had another convulsion and was removed to a general hospital but returned home next day still mentally clear. Shortly after his return home he began to see dogs, cats and snakes and became very frightened. He saw people on the walls of his room and thought someone was fighting him. It became impossible for his people to keep him in bed. On admission here he was in good physical condition outside of a few minor neurological symptoms. He stated that he not only saw many cats and dogs

around his bed but saw a pork chop flirting with a fish and a biscuit dancing with a knife. He heard many voices calling him vile names and threatening to kill him. This patient, though quite irritable and obviously hallucinated in both auditory and visual fields and delusional, co-operated fairly well from the start and ten days after admission and the complete withdrawal of alcohol, his hallucinations suddenly left him and his delusions became much weaker and they finally all disappeared four days later, or two weeks after admission. It will be seen that this case much resembled delirium tremens. But the auditory hallucinations in the end predominated over the visual and the attack was of longer duration than the usual case of the D. T.'s.

In the second example of this classification we will take the case of R. K. (col.). Was 29 years of age and admitted drinking heavily for the past three years and was intoxicated the week previous to admission. Except for exaggeration of the deep reflexes and some irregularity of the pupils he was in good physical health. On admission he was very nervous, irritable, impulsive and resistive. Had to be carried to the ward and was so violent that it was necessary for the first week to keep him in restraints. Was incoherent and irrelevant and obviously hallucinated in the auditory sphere. He had to be tube-fed several times because he was suspicious of the food and refused to eat. About ten days after admission his hallucinations and delusions suddenly left him and from that time on he rapidly improved, developed good insight and became very amiable and co-operative.

Under "other types" are grouped psychoses on an alcoholic basis not listed among the four types already described. The final classification includes the chronic alcoholic hallucinatory states in which there are signs of deterioration and in which the symptoms of acute hallucinosis persist with a lessening of the accompanying emotional reaction.

The primary thing in the treatment of any alcoholic psychosis is the prompt and immediate withdrawal of alcohol. The second essential thing is a thorough physical examination plus routine laboratory urinalysis, blood count and blood chemistry. The bowels and the kidneys must be flushed out and elimina-

tion promoted by every reasonable means. Liquids as a rule, should be forced, and if the patient refuses to eat or drink, recourse is at once had to nasal tube feeding fortified by rectal feeding and intravenous administration of 5% glucose in normal saline if necessary. Supportive treatment is frequently required for a shorter or longer period so cardiac stimulants are used. Restraints are seldom necessary except in the more violent cases and then usually only for a short period. Hydrotherapy in the shape of cold packs or continuous baths usually are very efficacious in controlling the excitement. When drugs for sedation are found necessary the various amytal compounds are used. If the patient is fairly co-operative a liberal nutritious diet is prescribed. As he begins to improve, psychotherapy is instituted daily with the idea of promoting the patient's insight. Occupational therapy is of great value in these cases, as it not only helps restore the patient's self-respect by giving him an interest in something useful, but promotes his physical well-being as well.

A supplementary method of treatment of acute alcoholism and the resultant psychoses is coming into vogue—spinal drainage. In expert hands this is easily and quickly performed with a minimum of discomfort to the patient who experiences both psychological and physiological benefits. In general it has been found that these cases have an increased spinal fluid pressure and by draining each time to one-half of the initial pressure it is possible to reduce the pressure to normal. Some individuals require a large number of drainages—the most we have given to anyone was thirty-two—at the rate of two a week. In others six to eight drainages appear to be sufficient. Two individuals, psychopaths to start with, failed to materially benefit. The remaining thirty-four cases all appeared to derive some good from the treatment. Not all of the alcoholics receive this treatment for various reasons, as for instance the individual who is more than usually weak physically or who has in addition to his alcoholic psychosis some infectious disease.

From the last Biennial Report of the Delaware State Hospital the following facts may be gleaned:

For the two-year period July 1, 1932 to June 30, 1934, there were admitted 47 men and 3 women whose diagnosis was Alcoholic Psychosis. This was 11.57% of the total admissions. 41 of the men were from New Castle County, 5 from Kent and 1 from Sussex County. Three men died, 11 were discharged, 2 transferred to Veterans' hospitals, 18 were paroled and 13 are still in the hospital. One woman was discharged, 1 paroled and 1 still in the hospital.

According to race the 50 new admissions classed as Alcoholic Psychosis for the aforesaid two-year period were as follows:

| Race                  | Male | Female |
|-----------------------|------|--------|
| English .....         | 3    | —      |
| German .....          | 1    | —      |
| Irish .....           | 7    | —      |
| Italian .....         | 2    | 1      |
| Slavonic .....        | 3    | —      |
| Mixed .....           | 15   | 1      |
| Negro .....           | 15   | 1      |
| Not ascertained ..... | 1    | —      |
| Total .....           | 47   | 3      |

#### DEGREE OF EDUCATION

| Race                   | Male | Female |
|------------------------|------|--------|
| Illiterate .....       | 2    | —      |
| Reads and writes ..... | 4    | 1      |
| Common school .....    | 33   | 2      |
| High school .....      | 3    | 0      |
| College .....          | 2    | 0      |
| Unascertained .....    | 3    | 0      |

#### ECONOMIC CONDITION

|                   |    |   |
|-------------------|----|---|
| Dependent .....   | 8  | 1 |
| Marginal .....    | 38 | 2 |
| Comfortable ..... | 1  | 0 |

#### MARITAL CONDITION

|                 |    |   |
|-----------------|----|---|
| Single .....    | 19 | 0 |
| Married .....   | 21 | 1 |
| Widowed .....   | 5  | 1 |
| Separated ..... | 2  | 1 |
| Divorced .....  | 0  | 0 |

The total number alcoholic psychoses remaining in the hospital—including new and old admissions at the end of June, 1934, was 33—28 males and 5 females. On parole there was a total of 23—21 men and 2 women.

### THE MENTAL EXAMINATION

CLAUDE UHLER, M. D.

Assistant Clinical Director Mental Hygiene Clinic  
Delaware State Hospital

Farnhurst, Delaware

The patient is received on the basis of a complaint. This complaint is obtained in the patient's own words as a simple expression of feelings and ailments. A tentative impression of the case with principal findings is usually



forwarded with the patient in preliminary communications.

At first the patient is considered in the light of his symptoms as he, himself, interprets them. Too often, complaints are merely repetitions of phrases and diagnoses picked up in the rounds of physicians' offices, or from medical publications. The important item is how the patient suffers as stated in his own language, free from indoctrinated views.

In his physical and social status a person is very much as he feels, irrespective of pathology, latent or obvious. Persons react differently to the same degree of physical disability. Pains and weakness are never the same in any two identical lesions. Even in the same individual the amount of pain fluctuates with the tone of regulative faculties.

A personal history is secured from a reliable source. The patient's own narrative supplements information, obtained from relatives or friends, covering details of antecedents and personal development at various age levels. The story tends to reveal the subject in perspective against the background of his experience and environment. It is not so much a citation of operations and diseases, as it is a description of reactions and achievements, at each physiological level, including educational, marital, and economic progress. Such a study emphasizes health and adaptability, as opposed to a vital statistics of accident and disease.

The psychiatric interview is conducted in the absence of any third person. The patient understands that all preliminary information about his case has been forwarded. He knows that the clinic physician is already informed of his intimate worries. He can start his recitation as he sees fit without fear of criticism or ridicule.

At first, the patient is observed objectively in his general appearance, demeanor, and posture. He is identified in respect to physiognomy and build. He is then led to present his story. Allowances are made for moments of confusion over the novelty of the setting. The patient is not compelled to rush his narrative to the point of giving mere lip service to his malady. Since he may not possess facility of speech, he is not forced to keep up a steady stream of conversation. He is per-

mitted to say exactly what he wants. He is not on trial. He is an object of study and, as such he best reveals himself free of constraint and self-consciousness.

Deductions are not warranted until all preliminary conditions of the interview have been relatively standardized. Notes on attitude, stream of thought, and speech are valuable only so far as other conditions of the interview are kept constant. The patient becomes the only variable quantity. He comes to feel that his case is the all important consideration, and is free to talk and act naturally to the extent that his nature permits.

Since speech is the common means of expressing one's ideas, an early estimate is made of its accuracy, not so much in the light of syntax or rhetoric as in the light of being an efficient instrument for conveying thoughts and feelings.

Although the patient's mood or attitude may be transient, the emotional coloring at the time reflects certain personality features. A direct statement in quotes is usually obtained in regard to the patient's frame of mind or his spirits. A person may be very sad or worried in regard to the particular ailment which brings him to the physician, but as a steady trait he may be of a very cheerful disposition. The mood, either reactive or constitutional, largely determines the extent of disability. Even in organic brain disease a mood disturbance may be the only conspicuous problem, masking the underlying condition until a mental examination is completed.

Content of thought is determined largely by what the patient says about himself. The determination of what a person is worried about and how it affects him is dependent upon that person's stream of thought and manner of expression. There may be an initial retardation which is overcome at an early stage in the interview. The patient is sometimes clear in his own mind about what he wants to say but when he actually makes his statement, he finds that he has failed in his meaning or he has even started a new theme. In this manner he is carried along precipitously by the volubility of his discourse like flood waters over a dam.

The patient's ideas can be evaluated only through the methods commonly employed in

expressing those ideas. In a routine mental examination a study of speech and expression is sometimes sacrificed for information about thought content. As paradoxical as it may seem, what a man says he thinks is less revealing of his true nature than the way he thinks and the way he expresses his thoughts. Does he indulge freely in abstractions or generalizations? Does he maintain the goal idea? Does he lose the theme to ramble into subordinate channels, blocking all return by a maze of detail? Does he manufacture words or phrases, or use stock expressions? Does he make short cuts at the expense of accuracy? Is he satisfied with approximations?

The patient may feel that it is necessary to exhaust every side issue of the subject before he reaches the main point. He may repeat the goal idea in a succession of rhetorical variants, as characteristic of him as his dialect or accent. For this reason it is necessary to distinguish between natural and pathologically acquired patterns. For instance the self-centered person habitually uses the personal pronouns, "You", "I", "He", "She", even in formal settings. Personal references dominate his offerings.

Identification of personality type is made much more readily by observing expression and stream of thought than by noting concepts and subject matter. For classification purposes it is necessary to know if the patient entertains ideas of reference or persecution, or if he hears voices or sees things. The subject matter of pre-occupations nominates the reaction type as a depression, a paranoid, a praecox, a hypochondriac, or a neurotic. The concepts, as such, determine classification. For purposes of treatment, however, much more vital is the understanding of dynamic factors in the active, waking states, evolving amplifying symbols for speech and action, as a means of expression.

The next step is the examination of the sensorium. This division comprises the cognitive faculties of the personality, the topical as opposed to the regulative or emotional components.

Awareness of time and place, as well as recognition of persons is the function of orientation, a phase of consciousness. A man is oriented if he knows where he is, who he is, and when it is. The more appreciation a man

has of all aspects of his environment, the more accurate is his orientation.

The mechanisms of attention, comprehension, and memory are the implements with which consciousness works. These implements and their capacity for work may be limited by constitutional endowment, just like strength, height, and weight. They may be ineffective and stunted by arrest of development or by accidental interruptions. They may be completely lost to consciousness by the destruction of the material of which they are made, as in disintegrating mental disease. These functions and capacities as a group make up what is commonly known as intelligence. They are measurable by formal tests. Barring experiential influence, they remain constant in their effectiveness for each person throughout his lifetime.

The final step in the psychiatric interview is the determination of insight. This is ordinarily understood to mean the patient's own appraisal of his ailments. If he is appreciative of the nature of his problem, he has insight. In its simplest sense insight denotes degree of recognition of the particular problem which demands relief. In its broader aspects the term implies a capacity for knowing one's self, as well as one's symptoms. It may even infer a knowledge of personality assets and liabilities and capacity for self-criticism. Adequate insight usually indicates fair prospects for recovery.

The physical examination, including routine study of the brain and cord segments in their projection to the periphery, is equally as important as the psychiatric interview. It is desirable for the physician who completes the mental status to make also the physical examination. The psychiatrist in the practice of his specialty as a branch of medicine should be as well-trained in physical disease, medicine, and surgery, as the brain surgeon or the pediatrician. The patient is not merely a combination of separate organs. The soundness of each individual organ or unit does not necessarily insure the integrity of the whole. There exist levels of integration in the total personality which must remain intact in order to span effectively apparent discontinuities in function, such as exist between vegetative and psychogenic processes.

In the pursuance of the policy of emphasizing



ing function, the neurological examination is outlined not so much along anatomical lines as along lines of action and use.

The brain and cord segments are examined functionally in the order of (1) olfactory and visual mechanisms under control of the fore-brain and midbrain segments respectively; (2) the mastication function under control of the anterior hind-brain segment; (3) the auditory-facial-abducens group under the control of the middle hind-brain segment; and (4) the taste-swallowing-breathing-talking function group under the control of the posterior hind-brain segment. The cord segments have orderly peripheral projection accessible to routine motor and sensory tests. The motor disturbances that follow impairment of supra-segmental functions, such as are localized in the cerebellum or the extra-pyramidal system are distinguishable by the findings in the routine neurological examination.

The examination proceeds, not in the direction of anatomical parts and proximates but in line with functional groups, noticeably constructed for the purpose of adaptation and survival. The findings in the neurological examination in this manner become intelligible as defects in function and efficiency.

Somatic disease apart from the cerebro-spinal system is a direct cause of some major mental disorders. A study of the human organism that omits a routine physical examination is only a chance shot in the dark as a diagnostic instrument. Such an investigation has no place in the scientific determination of causes. For instance a study of memory defect is only of experimental interest unless correlated with blood pressure readings, circulation, nutrition, and metabolism. In the neuroses a person cannot be said to be suffering from a hypochondriacal conversion in the presence of an organic defect within the field of projection. A patient cannot be suspected of subconsciously making a bid for attention by playing the role of a chronic invalid in the presence of physical disease within the field of that invalidism. Little is gained by emphasizing fixations and regressions in psychoanalytic palaver as an explanation for emotional tantrums in the presence of known toxic influences, such as cardiorenal disease or glandular imbalance.

In this connection the presidential address at the Ninetieth National Meeting of the American Psychiatric Association included this quotation, pertinent now as then: "After a fourth of a century of growth and change, it is time to re-examine and strengthen the foundation of the Mental Hygiene movement. The parlor psychologist like the parlor social-ist has had his day. Lecturers and writers who disguise the pill of serious fact with a spicy coating of sensationalism must give way to qualified psychiatrists to whom psychopathology is a scientific study rather than a remunerative way of titillating suburban ladies."

In the mental examination, as outlined, the following main divisions have been discussed: First, the referral; secondly, the complaint; thirdly, the taking of the personal history; fourthly, the psychiatric interview; fifthly, the personality analysis; sixthly, the physical examination.

In summary the human organism is studied in terms of reactions and attitudes in definable situations, as behavior, consciously integrated, with a physical set-up supplying abilities and capacities for response and adaptation. The total functioning personality is seen in length as well as in cross section in the light of acquired patterns of action with instinctual driving forces, as constant components in the subject-organization. For the purpose of revealing these structures and these forces the mental examination is directed.

The examination aims to show, first, the basic material out of which the patient is constructed; secondly, the critical situation which he faces; and thirdly, the approach to a solution or a cure.

The patient is seen as a psycho-biological unit of well-defined material make-up with an organization of past experience and memories, and a system of signs and symbols for use in the waking state. No distinctions are made between "functional and organic" or "mind and body." The mental examination deals with a total personality.



## THE WORK OF THE OBSERVATION CLINIC, 1931-1935

ELMER KLEIN, M. D.

First Senior Assistant, Observation Clinic  
Delaware State Hospital

In a previous communication by the first physician in charge of the Observation Clinic the history, purpose and procedures of the Clinic were outlined.<sup>1</sup> The building having been open less than a year at that time, little in the way of pointing to accomplishments could be done. The Clinic had then just become the tangible expression of the vision of a progressive Superintendent, backed by the confidence of the State. In the four years that have elapsed since its founding a sufficiently large number of patients have passed through it to allow some accounting which could give partial answers to the questions "Have hopes for the Clinic been well founded? Has confidence in its establishment been well placed?"

A statistical evaluation can give only a limited answer to these questions. It will be remembered that one of the important purposes of the Clinic was to protect the patient from the stigma of legal commitment which a stubbornly traditionally minded public is so loath to give up. This is a qualitative value of considerable importance, not only insofar as the patient's rehabilitation in the community is concerned after his leaving the hospital, but also in the matter of his willingness to remain under hospital care, accessibility to treatment and retaining a sense of self-respect for having some responsibility in the matter of his remaining in the hospital. For the patient's family, of course, there exist similar considerations, and there will be less likelihood on their part of taking a fatalistic and skeleton-in-the-family-closet attitude. Thus the patient is less hampered in his recovery, the physician in his work with him, and the family in gaining a sensible perspective, by the removal through voluntary or semi-voluntary commitment, of unnecessary tradition-imposed burdens. To enter a diagnostic unit which is not an integral part of the larger State Hospital will not mean to the patient nor to the family as having the air of finality which admission to a State Hospital carries. Here, because the number of the patients is known to be small and the personnel is relieved of the mass care of a large number of patients, it is sensed that

the patient will receive careful study and diagnosis of his case, with every treatment available to a modern hospital. If, however, no improvement should take place after a period of time, the transfer for a more protracted stay at the State Hospital itself will be found logical and easier to accept.

The rules governing the reception of patients to the Observation Clinic are liberal. Any citizen of Delaware suffering from a mental or nervous disorder which offers hope through active treatment, or where a special diagnostic problem exists, is eligible for admission, through application by the family physician to the Superintendent and approval by a member of the Board of Trustees. On the other hand, where there is a well-established mental disorder likely to need long care, the patient is more apt to be admitted directly to the State Hospital proper. The medical and social problems for which patients are entered at the Clinic cover a wide range. Patients are referred largely by practicing physicians, either directly or through the Mental Hygiene Clinic where they receive a preliminary examination to determine their suitability for the Clinic. Most of them come from the population at large and some through other State institutions or the Courts and from general hospitals.

The causes of referral can be grouped under the following categories: (1) Well-defined mental disorders (major psychoses) in their incipient states. (2) Groups which may be classified under the designation of minor psychoses, comprising those patients presenting various personality or somatic dissatisfactions, mostly of psychogenic origin—cases described by physicians as psychoneuroses, and by families euphemistically as cases of nervousness. (3) The third group falls between these two. They present neither a well-marked psychosis nor a psychoneurotic reaction, but present some maladjustment to their environment—often of long standing—which interferes with health, happiness and work either of their own or of others. In this category might also be placed those miscellaneous cases which are community problems through antisocial behavior, various forms of delinquency and misconduct, alcoholism, marital difficulties, etc. (4) The Clinic has had a

small number of children and adolescents presenting various nervous disorders and behavior difficulties in the home, school or community. (5) In this group are included a number of patients with some psychological changes, but presenting problems which are in the main neurological.

In regard to the first group of cases it should be mentioned that the Clinic has been able to render valuable service to the general hospitals of the State. Many patients in the course of their physical illness develop mental symptoms which may be perplexing to the medical and nursing staff of the general hospital. They offer difficulties from the diagnostic treatment and administrative point of view of the general hospital. The psychoses may develop incidental to various infectious diseases, in the course of heart disease, following puerperium and surgical operations, and as a result of various intoxications—bromides, lead, alcohol, etc. Many of these patients were transferred to the Observation Clinic, with great advantage to the patient and diagnostic assistance to the referral source. As one example the case of a middle-aged woman might be cited. She was diagnosed as major hysteria in one of the Wilmington hospitals and had to be transferred to the Observation Clinic because of the difficulty of her management and the disturbing mental symptoms. Through the superior diagnostic facilities of the Clinic the condition was recognized within forty-eight hours of her admission as being the result of bromide delirium and through appropriate hydro-therapeutic, dietary and other treatment within two weeks the patient recovered. Unrecognized cases of epilepsy, post-encephalitis, lead encephalitis, brain tumor and trauma, and luetic meningo-encephalitis might be similarly cited. The usefulness of the Clinic to patients with physical disorders having abnormal mental changes has been shown in cases of hyperthyroidism, cardio-vascular disease, arthritis, Hodgkins' and other somatic diseases. The hydro-therapeutic, and in some ways the physio-therapeutic equipment is superior to what is usually found in an average general hospital. With most of the Clinic patients being ambulatory the bed patients are more likely to get intensive bedside care. Another

advantage is that patients and personnel have a greater tolerance for noise and disturbing behavior than is likely to be found in the general hospital.

The largest number of cases admitted in the group of major psychoses belong to the functional group consisting of schizophrenia, manic-depressive, and paranoid individuals. These, together with patients in whom cerebral-arteriosclerotic, senile or other structural or physiological brain changes (as in intoxications) are the leading pathology are generally referred by the family physician, either directly or by passing through the preliminary examination at the Mental Hygiene Clinic.

Partly for administrative reasons (overcrowded conditions in other parts of the hospital), and partly because it is felt that certain cases are more likely to respond to treatment in the more favorable environment of the Clinic, some patients are transferred here from other hospital wards. This is true of cases in the group of the major as well as the minor psychoses. In the entire group there are many incipient and relatively benign or doubtful cases which were received into the Observation Clinic with the view of clearing up diagnostic issues, and above all, to give them the best chance for improvement and recovery.

Many of these cases with their mild symptoms not fully developed, transitory course and individual clinical histories are not easy to pigeon-hole. To place them in the hide-bound scheme of rigid classification would not do justice to the facts and needs of the individual case. In other branches of medicine one deals with simpler and more clear-cut sets of facts in cause and effect relations and as to course and outcome. Even in the more severe and protracted psychotic cases of the State Hospital where the fundamental reactions stand out better a relatively inflexible diagnostic evaluation can be more justly applied. The diagnostic formulation of the Clinic cases, however—often minor, atypical or transitory—must rest more on problems of personality make-up and the reactions to vital life experiences which it has gone through, than on what one sees as clinical end products. When we use these broader diagnostic idioms, more suitable to our patients we find that,



expressing themselves in major disorders are extremes of emotional tension, either constitutionally ingrained or in reaction to situations charged with dramatic value to the patient. There are those showing extremes in action and thinking tendencies with evasions and dodging of reality by means of distortions or false elaborations of thought and experience, often with lack of emotional harmonization. Likewise abnormal behavior resulting from ill-advised, false or poorly-conceived plans for bridging discrepancies existing between ambition and limited capacity, and finally disturbed behavior, derived from a tendency to see trouble in the attitude and actions of others or in one's own function.

In the minor disorders we find attitudes of inadequacy and feelings of inferiority toward one's own constitution, performance or outlook, dissatisfactions with one's family or broader social relations, various forms of over-responsiveness to conflicts and cravings, expressing themselves in all varieties of emotional, somatic and vegetative dysfunctions.

It will be seen that so far these are all problems which primarily concern the individual himself. It is but a step—and not a very large one—to those individuals who are required to come to the Clinic, who through socially hostile or ill-balanced behavior involve not only themselves but others in the family or in the community. These often come by order of the Court or through the request of a community agency or family. These are cases in many respects similar to the group of minor psychoses except that in reaction they take a different form. In these individuals poor habit training, ingrained aberrant personality traits, life dissatisfactions, conflicts and frustrations take the course of antisocial or psychopathic streaks, alcoholism, sexual misbehavior, financial irresponsibility, marital incompatibility and maladjustment in other social relations. The life curves of these stormy petrels are apt to be very uneven, with occasional cropping out into psychotic episodes, from which often enough recovery is the rule. They are really socially rather than medically sick individuals. All too frequently with their inadequately developed sense of social responsibility they drift away from any solid social mooring, and if in the meantime society has

not dealt with them in a more summary way, under harsher categories than sickness, they will have several hospital re-admissions.

The number of patients admitted under the fourth group comprising children and adolescents has been small. Not that there is not a need for caring for patients in this age category. In its preventive aspects psychiatry has come to focus its attention upon this very age group. In mixing children with adult patients on the same ward, however, there arise administrative difficulties, annoyance to the older patients, etc., and for that reason the admission of children has had to be restricted. Those who have been on the ward were early schizophrenics, or schizophrenic personalities, those suffering from post-encephalitic neurological syndromes, children with difficulties of adjustment at home or in the school in the form of violent temper outbursts, unmanageability, etc. Two youngsters, a brother and sister, were treated with partial success for progressive muscular dystrophy.<sup>2</sup>

The neurological problems, usually with disturbing influence on the entire personality integration, have been interesting and varied. A pseudo-neurological case of hysterical paraplegia might be mentioned at this point. A successfully treated case of narcolepsy with cataplectic attacks, a case of tetraethyl-lead poisoning also leading to narcolepsy and later to hysterical pseudo-narcoleptic attacks, cases of brain tumor with marked mental distortions, post-encephalitic phenomena with largely motor disturbances and minimum mental changes have been some of the other neurological problems. A case of lead encephalopathy, disseminated myelitis, multiple sclerosis, alcoholic neuritis and a case of spastic paraplegia resulting from post-typhoidal osteo-arthritis should also be included. Those with central nervous system lues are conspicuous by their absence from this list, for as soon as those cases are definitely diagnosed they are transferred to the hospital wards.

It would be instructive to compare a four-year period of the State Hospital with regard to admissions and discharges, including recoveries and improvements, with similar data of the Observation Clinic for a like period of time. There is so much difference, however, in the type of material admitted, stage of ad-



vancement in the psychiatric status of the patients that comparisons would be misleading. There are in addition quite frequently differences in social and economic status and in degrees of intelligence, all of which have a bearing on the problem of disposition. These cannot very well be expressed qualitatively and to omit them in any statistical comparison would seriously distort the picture. We must, therefore, content ourselves with the bare statement of figures, which without controls may not be very illuminating to be sure, but which nevertheless, by reason of the impressive number of improvements and recoveries point to the benefits and gain derived from clinic treatment.

The number of admissions from February 1931-35 was 388. 244 of these were discharged. Of these 38 were discharged to their own or their family's care as recovered. The number of those improved was much more considerable, namely 128. Eighteen of those discharged were unimproved, but were allowed to go for it was not felt that they would derive any further benefit from remaining in the Clinic. This is largely the group of psychopathic individuals with alcoholism and sex delinquencies—a group the members of which are so trying psychiatrically. Of the total number of discharges sixty were without psychoses but in need of and responsive to psychiatric help. Forty-eight patients were transferred to the State Hospital proper for continued treatment, as they did not respond to treatment in the Clinic sufficiently or promptly enough to warrant their further stay. Some of these were transferred because they were too disturbing to other patients, or because of luetic or other venereal infections. Twelve of the total admitted cases died of diseases of the circulatory system or of intercurrent respiratory disease, and one of post-operative paralytic ileus. Two cases were suicides, which for psychiatric patients is a relatively good showing. It might be added that no suicides have occurred in the past two years.

In addition to being an important link in the health service of the community, the Clinic has been making a contribution as a teaching facility in psychiatric nursing. The State Hospital is affiliated with two general hospitals

of the State, from which a small number of student nurses are assigned monthly for training in the Observation Clinic. In addition to their practical nursing duties they receive eight hours of teaching by way of lectures and clinical demonstrations per month. The clinical material serves as a useful source for teaching problems since the students have an opportunity to see the evolution of psychiatric clinical pictures from their start. Too, many of the rank and file of these cases present problems such as they might well come in contact with in their average general hospital training. These are problems with which they are taught to cope, and when the general hospitals will accept the responsibility for handling patients who in the course of their physical illness may develop transitory mental symptoms they will no longer find necessary the transfer of such cases to a mental hospital.

The Clinic works in close collaboration with the nurse, the family, the family physician and whatever other potentially constructive human agencies and forces are present in the patient's environment. Rules regarding the visiting of patients by the families and home visiting of patients are flexible and visits are generally encouraged so as to help the patient feel that he remains an integral part of the family and the community. After the patient leaves the Clinic the social worker makes periodic visits to his home or place of employment to help in his adjustment and to report his progress. Often the patient himself is requested to return to the Clinic for an occasional check-up or further help. More usually, however, a report of the Clinic's findings, diagnosis, and recommendations for further management are sent to the family physician and the family, formulated in language to meet their respective needs, and the patient himself is urged to call on the family physician so that he may continue to give whatever treatment is necessary.

Historically the Observation Clinic is a novel experiment in community mental health service. It has been the offshoot of the same experiment which began thirty-three years ago in this country, with the establishment of psychopathic hospitals connected with general hospitals. Since the establishment of the first psychopathic hospital many others have been

founded and developed into valuable and modern centres of psychiatric care for the patients, wholesome influence for the community, and training for its personnel. It is the example of these centres that the Psychiatric Observation Clinic has attempted to emulate, with a modest claim for a measure of success which it is hoped the number of the patients it has benefitted and the rest of its work can warrant.

#### BIBLIOGRAPHY

1. The Observation Clinic in Delaware: C. R. Bennett. Delaware State Medical Journal, February 1, 1932, p. 33.
2. Pseudo-hypertrophic Muscular Dystrophy in Brother and Sister: B. G. Lawrence, Delaware State Medical Journal, May 1934, p. 108.

### A CASE OF EPIDEMIC ENCEPHALITIS

B. G. LAWRENCE, M. D.

Senior Assistant of Delaware State Hospital of Farnhurst

The patient is a 16-year-old white female whose family history and past medical history have no bearing on her present illness.

In June, 1934, she began to complain of frequent headaches. These were not severe and occasioned little notice.

On July 5th, after a swim, the patient collided with another girl, striking her head. That evening she was nauseated and vomited. There was a slight elevation of temperature. On the following day the headache was still present and the patient was slightly irrational. She complained of a feeling of numbness in the hands and of disturbance of the sense of smell. The mild fever persisted and on July 7th the temperature rose suddenly to 103°. The patient became definitely irrational. She was in a semi-stuporous condition from which she frequently aroused. The temperature continued high.

On July 10th the patient was admitted to a general hospital. The stuporous state persisted. When aroused she recognized her family and friends and showed interest in her surroundings, but it was impossible to converse with her. After July 16th there was slight improvement. On July 25th the stupor entirely disappeared. She then became restless, noisy and irritable. She was resistive and would often bite and kick her nurses. This condition continued with little change until the patient was transferred to

the Delaware State Hospital on September 14th.

Examination during the stuporous period showed a suggestively positive Kernig and absence of patellar reflexes, otherwise there was little of significance. There seemed to be no visual disturbance at any time.

Urinalyses were negative except for traces of albumin. Red cells were not diminished. Hemoglobin was 71%. Total white count on July 10 was 17,250, 61% neutrophils, 36% small mononuclears. July 15 total count 14,000, 69% neutrophils, 23% small mononuclears. August 13 total count 18,100, 79% neutrophils, 15% small mononuclears. August 20 total count 13,900, 81% neutrophils, 16% small mononuclears. This series indicates a relative increase in mononuclears in the more acute stage with a progressive increase in neutrophils as the acute process subsided.

While the patient was in the general hospital three lumbar punctures were performed. Examinations of fluid yielded the following results: July 11, globulin, faint trace, cells 91 per cu. mm., sugar normal; July 13, globulin negative, cells 63 per cu. mm., sugar normal; August 22, globulin positive, cells 12 per cu. mm., sugar normal. Colloidal gold determination was not done. Spinal fluid cultures showed no growth.

At the time of admission to the Delaware State Hospital the patient was quite noisy, continually crying out in a hoarse voice. Speech was unintelligible except for an occasional word. No rational responses could be obtained. Comprehension appeared to be completely lacking. The patient easily became agitated. Sleep was poor. The appetite was ravenous and indiscriminate. The patient would eat anything that was placed in her mouth. There was involuntary urination and defecation.

Physically, the patient was well developed but undernourished. The skin was dry with a scaly seborrhea. The pupils were equal and moderately dilated. Reaction to light was sluggish. Muscle strength was unimpaired. Co-ordination was extremely poor. Movements were choreiform in type and there were involuntary contractions of facial

muscles. Deep and superficial reflexes were normally active. There was no indications of pyramidal tract involvement. When an object was offered, the patient would attempt to grasp it and if held near the mouth she would try to take it with her lips.

Laboratory examinations were as follows: Urinalyses have been negative. 9-15-34—Hemoglobin 65%. Erythrocytes 4 million per cu. mm. Total white count 6,550. Small mononuclears 37%. Neutrophils 63%. Blood sugar, blood urea and blood calcium were normal in amount. Blood Wassermann and Kahn were negative.

Examination of spinal fluid, 9-18-34, revealed a very slight increase of globulin content, sugar normal in amount. Pressure was not increased. Spinal fluid Wasserman negative. Cell count 1 per mm. Colloidal gold: 555555311, a typical meningo-encephalitic reaction.

Treatment has included high caloric diet, sodium cacodylate, hypodermically, and mild sedation to decrease motor restlessness. Neutral wet packs were found to exert a beneficial relaxing and quieting effect.

It was noted that, following lumbar puncture, the patient was brighter, more alert, and seemed happier for a few days. Consequently, frequent lumbar punctures have been performed, each time draining until the pressure was less than ten mm. mercury. Laboratory examinations of fluid obtained has resulted in an interesting series indicating the gradual subsidence of the inflammatory process. Wassermann has been uniformly negative. Globulin has always been slightly increased. Sugar content has been normal and pressure has at no time been above normal. It is only in the colloidal gold curve that there has been definite evidence of pathology. Colloidal gold determination in chronological order, omitting the original one given above, follow:

|                     |       |            |
|---------------------|-------|------------|
| October 3, 1934 ..  | ————— | 555555420  |
| October 17, 1934 .. | ————— | 5555554210 |
| November 7, 1934    | ————— | 4555554200 |
| November 20, 1934   | ————— | 3355443100 |
| December 11, 1934   | ————— | 3345433100 |
| January 1, 1935 ..  | ————— | 3345320000 |
| February 5, 1935    | ————— | 2224442100 |

|                     |       |            |
|---------------------|-------|------------|
| February 26, 1935   | ————— | 0145321000 |
| March 12, 1935 ..   | ————— | 0345432110 |
| April 9, 1935 ..... | ————— | 0334432100 |
| April 30, 1935 .... | ————— | 1334443100 |

Numerous other punctures have been performed for drainage alone without laboratory tests being done on the fluid.

Progress has been slow. At the date of this writing there is no inco-ordination. The patient can be led about. Intelligence is still at a low level. The patient speaks a few words, repeating them over and over with little meaning. She responds to her mother's visits with evidences of pleasure and affection. She busies herself with primitive forms of amusement. Her favorite pastime is picking a piece of cloth to bits and hoarding the resulting threads. The mood is predominantly happy with flashes of irritability. She gobbles her food like an animal. She is unable to indicate her desire to void or defecate. After wetting or soiling herself, however, she expresses displeasure in her attitude. If allowed freedom she wanders restlessly about, disarranging all the objects in the wards, with an appearance of insatiable inquisitiveness. She shows no interest in her clothing, but will pick them to pieces if allowed to do so, or if not supplied with rags upon which to vent her destructiveness.

The onset and the clinical manifestations of the acute stage of this case were typical of epidemic encephalitis. A spinal fluid cell count varying from 50 to 100 per cu. mm. has been reported in the large majority of cases. A slight increase in globulin was found in 70% of cases studied in the St. Louis epidemic in 1933. An increase of sugar has been noted in a majority of cases, but a normal sugar content as in this case is by no means inconsistent with the diagnosis. The colloidal gold curve is generally of the tabetic type, but occasionally is of the parietic form as found in this instance.

Perhaps the most unusual feature of this case is the mental picture which has persisted after the disappearance of the acute febrile stage of the disease. It is true that the mental manifestations consequent to epidemic encephalitis are of many kinds. Most



common, particularly in children, are changes in character and disposition giving rise to serious behavior difficulties and making the child a problem in his school and community.

The widely publicized case of Patricia Maguire, in which a prolonged somnolent condition has followed an attack of epidemic encephalitis, is not unique. These somnolent states sometimes exhibit definite catatonic features. Patricia Maguire has certainly shown these features according to the recent reports of her case.

In chronic Parkinsonian states following epidemic encephalitis, there is frequently a slowness of mental activity, termed bradyphrenia, without any true dementia.

The literature of epidemic encephalitis makes little mention of dementia such as has occurred in the case I am presenting, although I have read statements that such dementia sometimes occurs. I have not yet found a report of such a case. I feel that continued observation of the mental state, and an attempt to correlate improvement of mental condition with changes in colloidal gold curve in the spinal fluid will be of interest.

### GENERAL PARESIS: TREATMENT WITH DIATHERMY

GERHART-JACOBY GORDON, M. D.

Assistant, Delaware State Hospital

Before the inauguration of malaria therapy by the Viennese scientist Wagner von Jauregg for treatment of general paresis (1917), no other agent of attack against the most dangerous sequel of the syphilitic infection was known except those chemical means used as remedy of the original disease.

It is certain that, until now, we do not possess any therapy of the general paresis as active and effective as the malarial treatment. But the applicability of this generally accepted and recognized method found its limit in an experience embracing 15 years of failures and mortal accidents which gave way to a more strict and rigorous selection of the cases before the treatment was begun.

Therefore, new methods of producing fever, with less risk, and more standardized reaction, were developed. The methods

which have been devised to produce fever are widely divergent, their value still remaining moot. Analogous to the malaria inoculation, other micro-organisms such as those of the rat-bite fever (sodoku) and of the relapsing fever were employed. They are considered as less aggressive and easier to overcome, but likewise are uncertain in their effect and results.

Elements of bacterial origin but non-infectious, bacterial extracts and sera were adopted, among these, typhoid vaccine and "pyrifer" are the best known. Simpler means are chemical, organic and inorganic materials, such as nucleinic sodium and sulphur. Results obtained through the use of these methods has proven to be generally more or less unreliable.

Constant control of the rise of temperature was the condition most sought after and this has been successfully achieved through the application of simple physical methods, especially diathermic hyperpyrexia.

The disadvantages of the malarial and the striking superiority of the therapeutic application of diathermic hyperpyrexia have been widely discussed, in America especially by Neymann and Osborne and by King and Cocke.

The opinion that the rise of temperature and its duration is the most important factor in every method of fever treatment is widespread, although some others still believe that the malarial treatment with its activation of the reticulo-endothelial system in the brain can barely be compared with the action of a simple elevation of temperature without any infectious process.

McKay, Gray and Winnant treated 28 patients with diathermy, obtaining very encouraging results. Among these cases there were three deaths, one of which is remarkable because of the failure of temperature regulation.

Neymann and Osborne gave a report of 25 patients treated with diathermic hyperpyrexia without fatality and clinical remissions of 66 per cent.

The comparative study by Neymann and Koenig reveals a definite superiority of the diathermic hyperpyrexia in relation to ma-

laria. The malaria treatment resulted in 18 per cent mortality but no mortality is reported for diathermic treatment. They call special attention to the fact that it was possible to apply *diathermic hyperpyrexia* to *arteriosclerotics*, *diabetics* and *cardiac cases*.

Our own experiences are based on the method performed with a high frequency, short-wave apparatus (system, inductotherm) and although the length of use is rather short and the quality of the selected cases is unfavorable, we intend to submit a report of a method which avoids the disadvantages of other methods and moreover is easily applicable to a large number of cases. The most desirable feature of this method is the simplicity of its technique and absence of burns which may occur in ordinary diathermy.

The procedure develops as follows:

The patient is placed upon a liquid diet the day of his treatment. A general examination is given, with special regard to his circulatory functions. He is placed upon the treatment table, wrapped in two rubber sheets and three blankets so that the entire body is covered except the head. The coil is laid upon his body, covering the chest and upper part of the abdomen, and the switches of the apparatus, one for the current and the other for the intensity of the heat, are turned on. The patient, if restless or agitated, is restrained by straps around shoulders, pelvis and knees.

Normally the temp. rises gradually in a straight line up to a desirable degree, taking three-fifths or four-fifths degree in a quarter of an hour, reaching 105 degrees after eight to ten readings, readings taken every fifteen minutes. The pulse rate shows generally the same gradual and continuous increase until 150 per minute. The respiration does not exceed forty on the average. The temperature is normally taken by mouth on quiet and co-operative patients, but must be taken by axilla in disturbed patients (states of excitation and confusion). The axillary temperature is usually 8/10ths or one degree higher than the sublingual temperature demonstrated by comparative measurements. The patient is under the constant care of the

physio-therapist who periodically transcribes the data obtained.

At 100 degrees the patient begins to perspire, the loss of water and chlorides being counterbalanced by adequate doses of saline solution. It is necessary to limit the amount of the fluid intake during the rise of the temperature curve, because large amounts of fluids retard the progress of the curve considerably. As soon as the desired degree is reached, the current is turned off and the coil removed.

With the removal of the coil, the temperature rises usually a half or one degree during the succeeding period. The temperature thus secured can be maintained for any desirable length of time, depending upon the condition of the patient, but is usually for not more than two hours. Upon conclusion of the treatment the rubber sheets and blankets are removed one at a time at half-hour intervals, in order to guarantee a gradual decrease of temperature. The entire procedure consumed on the average six hours—two hours at least being necessary to maintain the temperature level above 103½ degrees—which is considered the most effective phase of the hyperpyrexia treatment.

Special attention is given to unexpected events such as (A) too rapid increase of temperature, which is avoided by diminishing the intensity of the current, by increasing the liquid intake or applying cold compresses to the head. (B) Sudden abnormal accelerations of the pulse rate, which may be checked by injections of digalene, caffeine or adrenalin. (C) Nausea which usually results when the liquid intake exceeds the real need.

Constant control of the patient with a minimum danger and the possibility of interruption whenever necessary, makes this type of treatment very agreeable and successful both for patient and physician. More detailed results of this work will be forthcoming with the publication of our clinical reports at a later date.

However, we submit some general remarks in connection with the reactions of patients to this treatment.

The success of the method depends a great

deal upon the co-operation of the patient. In resistive and struggling patients we see a slower increase of temperature which is undesirable, and the over-exertion naturally weakens the body system immoderately.

After ten or twelve treatments — one treatment given every week—a large number of patients become unable to stand the treatment longer because of unbalance of the vasomotor equilibrium.

Therefore, we try to adapt every patient individually to the treatment to support a comprehensive curve for each therapeutic procedure. During the treatment periods the patient is confined to his bed but is usually able to walk about the following day.

Because of the applicability of this method to the general state of the patient, this treatment can be considered as a distinctive measure of his potential reserves, and as soon as any organic disturbance appears, the treatment can be interrupted and renewed under more favorable conditions. The selection of cases for this type of treatment certainly is not as severe as for the malaria therapy, but nevertheless precautionary selection is not discarded entirely. We do not presume, however, to support this treatment unequivocally for all types of general paresis, especially those showing seizures of any form, being excluded from treatment. Ages exceeding fifty years, mostly inveterate cases cannot be evaluated as accessible to the treatment. The treatment is combined with the usual chemical therapy, neither interfering with the other.

#### BIBLIOGRAPHY:

- (1). H. A. McKay, K. G. Gray and W. C. Winans: Diathermy in Treatment of General Paresis. *The American Journal of Psychiatry*, Vol. XII, 532-539, Nov. 1932.
- (2). C. A. Neymann and S. L. Osborne. The Treatment of Dementia Paralytica with Hyperpyrexia Produced by Diathermy. *J. A. M. A.* Vol. 96, 7-13 (Jan. 3) 1931.
- (3). C. A. Neymann and Koenig. Treatment of dementia paralytica. Comparative therapeutic results with malaria, rat bite fever and diathermy. *J. A. M. A.* Vol. 96, 1856-1860, May 30, 1931.
- (4). J. Cash King and Edwin W. Cocke: Therapeutic fever produced by diathermy with special reference to its application in the treatment of paresis. *Southern Medical Journal*, March, 1930.

### SENILE PSYCHOSES

JOAN F. MCGREEVY, M. D.

Junior Assistant Physician, Delaware State Hospital

During the present economic stress it has been noticed that there has been an increased number of admissions to mental hospitals and that mental difficulties seem to have been

precipitated by financial troubles at home. Many senile patients have been brought to the hospital by relatives who claim that, under ordinary circumstances, they would have been able to take care of these patients at home, but because of financial embarrassment they were forced to bring them to the hospital.

A new employee in a mental hospital is frequently apt to wonder why the old man (or woman), merely because he seems a little confused, restless, meddlesome, given to talking to himself at times, should be separated from his relatives and friends and put into an entirely new environment. The answer is, because the patient needs constant supervision; because he putters around and gets into all sorts of trouble; turns on the gas and forgets to light it; puts food to cook on the stove and forgets to remove it; gets up in the middle of the night without any conception of the time, and may fall down the steps or go out into the street in his night clothes. Because of his weakened mental capacities, he is constantly exposing himself to fire, falls, illness from exposure, etc. At other times, he refuses to eat because he conceives the idea that his food is poisoned. If left to his own devices, he would soon starve, and so the old man (or woman, as the case may be), is brought to a mental institution where he is placed on a ward which is fool-proof so far as bodily injury is concerned, where nurses are present to watch for the slightest change in a worn-out body, where physicians are readily accessible and where, if necessary, forced feedings can be resorted to. A recent study of admissions in the senile group from June, 1928 to June, 1934, reveals the following:

From June, 1928 to June, 1929, there were 102 males and 100 females, or a total of 202 patients admitted. Of this number, 5 women and 6 men (5.4%) fell into the class of Senile Psychosis. There were 2 male patients with a previous diagnosis of Senile Psychosis readmitted at this time, making the total number of admissions in this group 13. Six of these were cases of simple deterioration, which, with proper supervision, present little in the way of special nursing problems. The other types included in the group were: Paranoid 3, Depressed 1. Presbyophrenia 1. In this same year, 15 males and 9 females (or 10.4%),



suffering from Psychosis with Cerebral Arteriosclerosis were admitted. There was one re-admission in this group. Of these, 5 males and 2 females were over 70 years of age and showed senile changes as well as those produced by cerebral arteriosclerosis.

From June, 1929 to June, 1930, the total number of admissions was 241, of which 153 were males and 88 were females. Of this number, 9 males and 5 females (5.8%) were diagnosed as Senile Psychosis. There was one re-admission. Approximately 5 of these cases fell into the classification of Senile Psychosis, simple type. Although this was the first year of the financial crisis, there was no appreciable increase in the number of admissions in this group. Taking into consideration the arteriosclerotics admitted at this time, there were 19 males and 10 females (or 12%), of which 9 males and 3 females were over 70 years of age. There was one re-admission.

In the following year, i. e., from June, 1930 to June, 1931, there were 257 admissions, of which 10 males and 11 females (8.1%) of the total admissions were diagnosed as Senile Psychosis. There were 3 re-admissions. This was the first year that the Observation Clinic was opened, and two of these patients were admitted on that service. In March, 1931, a new building for the care of female patients was also opened, which accounts in part for the increased number of admissions at this time. In the arteriosclerotic group, there were 15 males and 10 females, or a total of 9.1% admitted. Three cases were re-admissions. Of this group, 10 were over 70 years of age.

From June, 1931 to June, 1932, there were 319 admissions, of whom 15 males and 16 females (9.7% of the total admissions) were diagnosed as Senile Psychosis. In the arteriosclerotic group, which closely overlaps the senile, there were 20 males and 11 females (or 9.7%) admitted. One female patient was re-admitted. Of this group 12 were over 70 years of age. About this time a new building for the care of male patients was opened, thus permitting more space for the care of many cases whose admission had to be postponed because of cramped living quarters.

In the following year, from June, 1932 to June, 1933, there were no new buildings opened and the admissions in this group decreased. Out of a total of 354 patients admitted, 12

senile men and 4 senile women (4.5%) were hospitalized. Most of these came under the type of Simple Deterioration. Several, however, were not classified according to type. The arteriosclerotics admitted at this time numbered 23 males and 11 females (or 9.6%). Three males and 1 female were re-admitted.

From June, 1933 to June, 1934, there were 342 admissions, of whom 11 men and 9 women (5.8%) came under the classification of Senile Psychosis. There was one re-admission. The figures for the following year will probably again show an increase, as three new wards were made available for use in July, 1934. Of the total number of admissions at this time, there were 17 males and 9 females (or 7.6%) classified as suffering from Psychosis with Cerebral Arteriosclerosis. There was one re-admission. Eleven of these cases were over 70 years of age.

The treatment of the senile patient who develops a psychosis is usually simply one of close supervision. Occupational therapy, hydrotherapy, psychotherapy are seldom of any real value, and the percentage of recoveries is low. In fact, if the senile does show any improvement following hospitalization, the improvement is usually slight. Recovery is apparent rather than real. Frequently, upon a return to his old environment, he quickly falls into his old peculiarities, restlessness, agitation and irritability and within a short period of time, has to be re-hospitalized. The Paranoid Senile cannot be reasoned with because of his forgetfulness and confusion and inability to comprehend what is told to him. He holds to his delusions until a steadily advancing senile decay gradually forces them out of his mind—although he may retain vague suspicions of those about him for many months, or may develop new but poorly systematized paranoid trends. The Depressed Senile frequently makes suicidal gestures, but because of slowness and confusion, his attempts are usually discovered before any serious injury can be done. These cases, as well as the paranoid types, frequently offer a serious feeding problem, the patient refusing to eat in the one case because he has no desire to live, and in the other because he feels that his food has been poisoned or otherwise tampered with by his enemies. In contrast to these two types are the cases of Simple Deteriora-

tion. In this group are found smiling, happy old people who are given to reminiscing pleasantly about the past, for which they frequently show a remarkably good memory, and can supply a wealth of fairly accurate details. They are sometimes irritable and their nocturnal restlessness may necessitate somewhat close supervision.

In many patients in the Senile group, cerebral arteriosclerosis complicates the picture. These cases are marked particularly by irritability, restlessness, emotional outbursts. Their irritability makes it difficult for them to get along with those about them. They are confused and are inclined to meddle in the other patients' affairs. If their meddling tendencies happen to bring them into contact with another individual with a personality similar to their own, a fracas results. The associated hypertension makes cerebral hemorrhages with their resulting hemiplegias, paraplegias, etc., relatively common in this group. If the patient is bedridden as a result of his paralysis, a serious nursing problem may ensue, as these old patients are prone to develop broncho-pneumonia, pressure sores and contractures.

#### CONCLUSION :

(1). According to the statistics at the Delaware State Hospital there has been no appreciable increase in the number of admissions of patients suffering from Senile Psychosis, from June, 1928, to June, 1934.

(2). The treatment is usually that of close supervision and should be carried out by someone who has had at least a little experience in the care of this type of patient.

(3). Cerebral arteriosclerosis frequently occurs in this group and may give rise to a more serious nursing problem. Of a total of 180 patients suffering from Psychosis with Cerebral Arteriosclerosis from July, 1928, until July, 1934, 65 (or 36%) over 70 years of age showed senile changes as well as those due to cerebral arteriosclerosis.

### DELAWARE AT THE A. M. A.

The eighty-sixth annual session of the American Medical Association will be held in Atlantic City, June 10-14, 1935. Under the Presidency of Dr. Walter L. Bierring, of Des Moines, Iowa, with Dr. James S. McLester, of Birmingham,

Alabama, as President-elect. All the scientific meetings and exhibits will be held at Convention Hall. The American headquarters will be at the Ambassador Hotel, where the sessions of the House of Delegates will be held. The House of Delegates will convene at 10 a. m., Monday, June 10, Delaware being represented by Dr. Charles E. Wagner of Wilmington, with Dr. Stanley Worden, of Dover, as alternate.

For the first time in history, the Canadian Medical Association will meet with their American confreres, under the Presidency of Dr. John S. McEachern, of Calgary, Alberta, with Dr. Jonathan C. Meakins, of Montreal, as President-elect. The Canadian headquarters will be at the Haddon Hall Hotel, where the meetings of their Council will be held. This will be the sixty-sixth annual session of the C. M. A.

The Woman's Auxiliary of the A. M. A. will have its headquarters at the Hotel Traymore, and its meetings will be under the Presidency of Mrs. Robert W. Tomlinson, of Wilmington. The ladies are one step ahead of the menfolk this year, in that their first affair will take place Sunday, June 9th, when the Delaware Auxiliary will give a dinner to the National Board, at the Claridge Hotel, at 7 p. m. For the whole of the convention week a very attractive program for the ladies has been arranged.

The headquarters of the Medical Society of Delaware will be at the Hotel Jefferson, 136 South Kentucky avenue. This relatively new hotel is just off the Boardwalk and is admirably suited to our purpose. It quotes a rate of \$5.00-\$7.00 for room with bath (2 persons), and three meals a day for \$2.00 per person. Secretary Speer will be on hand throughout the week to assist all Delawareans. An early reservation of rooms is advised. Those who go by train should ask the ticket agent for a certificate, which, after certification and validation, will enable one to purchase the return ticket at one-third the regular fare. Also, be sure to take your A. M. A. fellowship card so that you can register promptly for the scientific program.

The scientific program of formal papers is exceptionally good this year, and brings to the rostrum many of the best medical minds of the United States and Canada. These meetings are on June 12, 13 and 14, at 9 a. m. and 2 p. m. The scientific exhibits will be fully up to the standard, and the technical exhibits likewise; no visitor to the convention can afford to miss the opportunities these educational exhibits present.

The complete program and full information concerning the convention will be found in the *Journal of the American Medical Association* for May 11, 1935, pages 1709-1756.



# EDITORIAL

## DELAWARE STATE MEDICAL JOURNAL

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W. EDWIN BIRD, M. D. . . . . EDITOR  
Du Pont Building, Wilmington, Del.  
WILLIAM H. SPEER, M. D. . . . . Associate Editor  
917 Washington St., Wilmington, Del.  
M. A. TARUMIANZ, M. D. . . . . Associate Editor & Bus. Mgr.  
Du Pont Building, Wilmington, Del.  
Telephone, Wilmington, 4368

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### NEW PHILOSOPHY

The public has been slow to realize that insanity must be accepted as any physical disease, and that all at some time during their lives suffer from the identical symptoms that are found in the insane. It is undoubtedly a fact that in the last decade or two the frequency of mental illness in people has increased vastly, possibly due to conditions connected directly or indirectly with the machine age. The increase is becoming so alarming that one finds it vitally necessary to find means by which the situation can be corrected. It is undoubtedly a fact that preventive medicine in regard to physical illness has progressed relatively with the same tempo as the mechanical life of the civilized world. We can hardly conceive of a public school or any other school of modern times not taking adequate measures to prevent contagious dis-

eases. We also can hardly conceive of a community where means are not taken for public safety in regard to physical health. All large communities maintain clinics of all types to care for those suffering from various diseases. Yet, at the same time, we barely take any preventive measures in regard to mental aberrations in childhood, adolescence, or adult life. How many schools can boast of the fact that they have means by which they can cope with the many incipient symptoms of future serious mental maladjustments? How many communities can proudly say that they are watching the mental health of members of their group as well as they are caring for the physical side of their lives? How many people are allowed to develop a psychosis because they feel that there is no one they can turn to for help or because they feel that mental abnormalities should be carefully hidden.

It is true that the medical profession as well as social agencies have a better conception of the situation than formerly. It is also true that the medical schools are giving more instructions in psychiatry and mental hygiene than they did in the past years. To bring the standard of prevention of mental illness to the same level as that of physical illness, the medical profession must do more in the sense of education than it has in the past. The very best weapon in the hands of the physician to create an educational field in preventive psychiatry is the philosophy which is more and more finding its way in every honest thinking psychiatrist's mind; that is, that the symptoms of mental illness are occurring in every so-called normal individual's life as frequently as the symptoms of physical illness. It is commonly known that everyone except the low-grade feeble-minded suffers at some time during his life from such symptoms as phobias, fears, obsessions, anxieties, depressions, confusions, agitation, irritability, and excitability just the same as he suffers from pain in various parts of his body, elevation of temperature, cough, physical fatigue, etc. Therefore psychiatrists contend that mental illness is due to intensity, frequency, and pos-



sible permanency of the symptoms of so-called normal life, as well as the inability of the individual to create forces within himself to overcome those barriers to mental health. With this philosophy, a practicing physician can create a freedom of expression in the part of normal individuals with incipient symptoms, thus preventing serious consequences. It is hoped that all physicians will use this effective weapon in the field of preventive psychiatry.

### THE TREATMENT OF VINCENT'S INFECTION

W. H. NORRIS, D. D. S.

Visiting Dentist of the Delaware State Hospital

W. F. NOWLAND, D. M. D.

Resident Dentist of the Delaware State Hospital

Many articles have been recently published in various professional publications showing an indication of a re-awakened interest in the cause and treatment of Vincent's infection of the mouth. There is wide difference of opinion in these articles, giving evidence that there is still much research to be done before there will be a complete understanding of the various details of this disease, or a unity of opinion as to the best means of treatment. The disease is quite prevalent and its prevention and treatment are matters of importance. One should at least employ now those methods which clinical experience has proved to be most successful.

The direct cause of the disease is the combined effect of a spindle-shaped fusiform bacillus and the spirochete of Vincent's. These organisms are often found in the mouth as saprophytes and under favorable conditions become pathogenic. The disease often occurs in epidemic form, leaving no doubt as to its contagious nature. Epidemics are favored by crowding of people in close quarters, use of common drinking vessels, lack of fresh air and suitable fresh foods, and unhygienic mouths with general lowered resistance.

The gums are inflamed, painful and bleed easily. The gum margins are thickened and drawn away from contact with the teeth. The breath has a fetid odor, and there is marked salivary increase. In the very acute cases the edges of the gums are covered with a grayish white membrane which, when removed,

leaves a raw bleeding surface. There is progressive destruction of the marginal gum tissue, especially of the interdental septum, the alveolar process itself being eventually attacked. The teeth are sensitive to the slightest percussion and become loosened, being lost as the supporting bone is destroyed. The patient complains of headache, general malaise, pain, and there may be a rise in temperature. The submaxillary lymph nodes invariably are swollen and tender. Stained smears show microscopically a great preponderance of the fusiform bacilli and the spirochete of Vincent's.

There are many treatments advocated for this disease. There are certain underlying principles, however, that must be followed to insure successful treatment. Owing to the extreme tenderness of the gums the patient cannot use a toothbrush nor can he tolerate sealing or even moderate instrumentation of the teeth in the acute stages. It is inadvisable in the acute stages to do very much instrumentation on account of the danger of spreading the infection to adjacent tissues. However, as much as possible of the debris and slough should be removed by a swab soaked in hydrogen peroxide and an antiseptic mouth wash should be prescribed to the patient to help cleansing of the mouth. As soon as the acute symptoms leave, the teeth should be sealed.

For local treatment, chromic acid 7% has proven to be very satisfactory. It is applied around the necks of the teeth and into the interproximal spaces. Hydrogen peroxide is used as an oxygen liberating mouth wash. The principal point to be remembered is persistence in treatment.

The general treatment consists of three intravenous injections of neo arsphenamine, which is a specific for spirillae. It has been found that in cases where it has been used, there have been no recurrences of the disease. In cases where neo has not been used there is a tendency to have chronic manifestations of the acute infection. As this is undoubtedly a contagious disease, the patient should be advised to isolate himself as much as possible, by using separate dishes, towels, etc.

The bowels must be kept open, anodynes may be necessary to relieve the pain. We

should endeavor to build up patient's general resistance by proper diet, consisting of green vegetables and fruit juices in abundant amounts, rest, plenty of fresh air and sunshine. As soon as the local conditions permit, the teeth should be sealed, decayed roots and hopelessly loosened teeth extracted and carious cavities should have the necessary restorations made; and the necessity of good oral hygiene explained to the patient.

May 7, 1935.

### A STUDY OF CHILDREN OF PSYCHOTIC PARENTS WITH RESPECT TO FACTORS REVEALED ON INTELLIGENCE EXAMINATIONS

WALTER C. SHIPLEY, Ph. D.

Psychologist, Mental Hygiene Clinic, Delaware State Hospital

Since its foundation in 1929, the Mental Hygiene Clinic of the Delaware State Hospital has come into possession of a sizeable and steadily increasing accumulation of systematically obtained data on persons of every description. Although the data were primarily employed as an adjunct to psychiatric treatment and disposition, it seems highly probable that as time goes on they will prove to be of ever-increasing value for research purposes. Already they seem to be shaping themselves. What was originally a mass of heterogeneous and disconnected information is now beginning to assume form and to intercorrelate. As time goes on, it is to be expected that the data will continue to grow and interrelate, so that by means of case history and statistical studies, new avenues of approach to some of the more elusive problems of greater psychopathology will be opened up. The present paper is intended as a rudimentary illustration of one of the many types of problem susceptible to attack through data now in the process of accumulation in the clinic files.

During its course of activity the Mental Hygiene Clinic has examined, both psychiatrically and psychologically, upwards of a hundred children whose parents at one time or another have been patients at the Delaware State Hospital. Some of these children have been referred by outside agencies, such as schools, judges of the juvenile court, charity organizations, etc.; others have been referred

by Dr. Tarumianz, Superintendent of the hospital, for the express purpose of obtaining a more complete family picture as an aid to diagnosis and treatment of the patients themselves. But, though obtained for clinical purposes, the data are available for research and the line of inquiry which immediately suggests itself is the possibility of discovering factors which may be indicative of impending mental aberration. Children of psychotic parents furnish a fertile soil for such investigation, for, though psychosis in parent is not necessarily followed by psychosis in child, still, it has been generally established that the incidence of psychoses is greater in families of psychotic ancestry.

Since practically all of the above-mentioned children of hospital patients were given intelligence tests, the present study, which constitutes a comparison of their test results with those of comparable groups of children of non-psychotic parents, was rendered possible. The comparison, made on the basis of findings of the Stanford-Binet scale, was directed toward two aspects of the intelligence picture, namely, (1) the dispersion or *scattering* of responses over a range of age-levels, and (2) the absolute intelligence score, or I. Q. For a brief description of the construction of this test and explanation of the I. Q. (intelligence quotient) the reader is referred to the article by the writer in the May, 1934, number of this journal.

With respect to the first aspect of the problem a word of explanation is in order. The Stanford-Binet test is composed of seventy-four subtests arranged according to age-levels, there being usually six subtests at each age-level. But it is not to be expected that a person will pass all the subtests at his own age-level and no others. Even a normal person will almost invariably fail a few tests below his level and pass a few above. This, of course, is only natural, because all of us are better in some things than we are in others. Consequently, in giving the test it is customary to extend the testing down to a level at which the subject passes all the subtests and up to a level at which he fails them all. The difference in years between the level at which he passes all subtests and the level of the highest subtest passed represents the range of the individual's *scattering*. As it



has been found that psychotic individuals tend toward excessive scattering, it was deemed worth while to determine whether their children exhibit the same tendency. To this end the test cards of 52 of these children were selected from the clinic files and matched, when possible, with those of comparable children who were not offspring of psychotics. The study was limited to white children between the ages of six and eighteen years, and, as far as was known, to those of native parentage. The match was made on the basis of sex, mental age, and I. Q., a leeway of two months in the former and five points in the latter being allowed. Because of the high selectivity involved in the pairing, matches were obtained for but 40 of the cases—19 boys and 21 girls. Inasmuch as all cards were selected without fore-knowledge of the extent of scattering, the experiment seems to have been adequately controlled in most respects.

The results of the comparison are markedly negative. The average scatter for the children of psychotics proved to be 4.15 units as compared with 3.98 units for the controls. The slight difference is negligible. If it were a true difference in the direction and to the extent indicated, over 67,000 cases would be required to reveal it in statistically acceptable form. Any tendency requiring such an exorbitant sampling to reveal it can hardly be called a tendency at all. However, there exists one factor in the present study which necessitates deference of the suggested conclusion that children of psychotics reveal no more tendency toward scattering than do normals. This is the fact that the control group employed cannot be considered strictly "normal," as it consisted of clinic cases, most of which were referred for some type of maladjustment in the broader sense. To be sure, it is highly doubtful whether they were sufficiently abnormal to vitiate the results, but, the possibility must be borne in mind until the matter can be cleared up by further research. Fortunately for the problem at hand, the clinic is gradually obtaining data on "true normals" which eventually should suffice to settle the question.

The second aspect of the problem, namely comparison of the I. Q.'s of offspring of psychotics with those of normals, is much more suggestive of a difference, though the inter-

pretation of the difference is as yet by no means clear. This comparison was made between the original 52 members of the above group of offspring of psychotics and a group of 23 first-grade school children in a representative Delaware town. This latter group, composed of 13 boys and 10 girls, may be considered as a representatively normal group, since the children had not been referred to the clinic because of difficulty, but had been examined for experimental purposes. The composition of the two groups with respect to intellectual level was as follows:

| Children of Psychotics (52 cases)             |     |
|-----------------------------------------------|-----|
| Superior (I. Q. above 110) . . . . .          | 4%  |
| Normal (I. Q. 90-109) . . . . .               | 46% |
| Dull-Normal (I. Q. 80-89) . . . . .           | 16% |
| Borderline (I. Q. 70-79) . . . . .            | 23% |
| Mentally Defective (I. Q. below 70) . . . . . | 12% |
| Average I. Q.—86.6                            |     |

| Normal Children (23 cases)   |     |
|------------------------------|-----|
| Superior . . . . .           | 17% |
| Normal . . . . .             | 52% |
| Dull-Normal . . . . .        | 17% |
| Borderline . . . . .         | 9%  |
| Mentally Defective . . . . . | 4%  |
| Average I. Q.—95.6           |     |

It will be seen that the children of psychotics are inferior to normals intellectually. Besides the nine-point difference in average I. Q. the former group contributes a noticeably greater proportion to the lower levels, while the latter does the same for the higher ones. It does seem, therefore, that insofar as the groups are representative, the children of psychotics do constitute lower intellectual stock.

The interpretation of this finding is not yet clear. One plausible explanation is that the parents themselves were below the average intellectually and that the children tend to approach the parent's level. Considerable evidence both for the greater prevalence of psychoses among intellectual retardates and for the inheritance of intellectual level is at hand. Interesting in this connection are facts obtained from the hospital records of the parents of the six mentally defective children comprising the 12% given in the table. Each of these six children, none of which were siblings, had one parent in the hospital. Of the six parents, four received diagnoses in which mental deficiency was mentioned as part of the clinical picture. The remaining two, though not classified as mentally defective,



were in all probability retarded, and while their recorded I. Q. 's of 59 and 60, respectively, can probably not be considered valid in view of their mental condition, still there is every reason for believing them to be retardates. While it is quite likely that the above interpretation is in a measure true and pertinent, it is possible or even probable that more subtle factors enter into the problem. The results speak for themselves. Any adequate interpretation must await further experimentation.

The present study represents but a rudimentary and perfunctory illustration of one of the many types of problem which in all probability will be rendered susceptible to experimental attack through data gradually accumulating in the files of the Mental Hygiene Clinic of the Delaware State Hospital.

**“NORMAL” WHITE AND COLORED CHILDREN**  
**A Comparative Study**

MARION MCKENZIE FONT, M. A.  
Psychologist, Mental Hygiene Clinic, Delaware State Hospital

In the fall of 1933, the Mental Hygiene Clinic began a project which was expected to last over a period of eight years, and to furnish interesting data on the so-called “normal” child. The white children then composing the first grade of the Georgetown School and the colored children then composing the first grade of the Booker T. Washington School in Dover were selected for yearly comparative study. As part of the project, each child was to be given a Stanford Binet test while a pupil of the first grade; and was to receive both the Stanford Binet and the Arthur Performance Seale, Form I, the following year, when a pupil of the second grade. The two original groups were to be followed and tested each year until the completion of the eighth grade. Later testing was to include various tests of intelligence and personality, in addition to the Stanford Binet.

By the end of the fall of 1935, the children will have been tested twice by means of the Stanford Binet and once by Form I of the Arthur Scale. At the time of the present writing, only twelve of each group had been given both the second Stanford Binet

and the Arthur Scale, Form I. Some children of the original group had moved out of the State, and some others could not be located.

The following report is a summary of the findings, (1) on the total number contacted during the second year, and (2) on the group of twelve white and twelve colored children who had received both the Form I of the Arthur Performance Seale and a second Stanford Binet test at the time of the present writing.

Twenty-three white children and thirty-four colored children were included in this report, with the following age range:

| Age       | White |        |       | Colored |        |       |
|-----------|-------|--------|-------|---------|--------|-------|
|           | Male  | Female | Total | Male    | Female | Total |
| 5.0- 6.0  | 1     | 0      | 1     | 2       | 1      | 3     |
| 6.0- 7.0  | 11    | 9      | 20    | 11      | 6      | 17    |
| 7.0- 8.0  | 0     | 1      | 1     | 3       | 7      | 10    |
| 8.0- 9.0  | 1     | 0      | 1     | 0       | 2      | 2     |
| 9.0-10.0  | 0     | 0      | 0     | 0       | 1      | 1     |
| 10.0-11.0 | 0     | 0      | 0     | 1       | 0      | 1     |
|           | 13    | 10     | 23    | 17      | 17     | 34    |

In mental age the range was as follows:

| Mental Age | White |        |       | Colored |        |       |
|------------|-------|--------|-------|---------|--------|-------|
|            | Male  | Female | Total | Male    | Female | Total |
| 3.0- 4.0   | 1     | 0      | 1     | 0       | 0      | 0     |
| 4.0- 5.0   | 1     | 1      | 2     | 4       | 3      | 7     |
| 5.0- 6.0   | 4     | 1      | 5     | 5       | 8      | 13    |
| 6.0- 7.0   | 5     | 6      | 11    | 7       | 5      | 12    |
| 7.0- 8.0   | 2     | 2      | 4     | 1       | 1      | 2     |
| 8.0- 9.0   | 0     | 0      | 0     | 0       | 0      | 0     |
|            | 13    | 10     | 23    | 17      | 17     | 34    |

The range in intelligence quotient for the two groups was:

| I. Q.   | White |        |       | Colored |        |       |
|---------|-------|--------|-------|---------|--------|-------|
|         | Male  | Female | Total | Male    | Female | Total |
| 50- 60  | 0     | 0      | 0     | 0       | 1      | 1     |
| 60- 70  | 1     | 0      | 1     | 3       | 1      | 4     |
| 70- 80  | 2     | 1      | 3     | 2       | 5      | 7     |
| 80- 90  | 3     | 1      | 4     | 5       | 6      | 11    |
| 90-100  | 2     | 4      | 6     | 5       | 3      | 8     |
| 100-110 | 3     | 3      | 6     | 2       | 1      | 3     |
| 110-120 | 1     | 1      | 2     | 0       | 0      | 0     |
| 120-130 | 1     | 0      | 1     | 0       | 0      | 0     |
|         | 13    | 10     | 23    | 17      | 17     | 34    |

The highest intelligence quotient found in the white group was 127, and in the colored group was 103. Both children were boys. The next highest intelligence quotient in the white group was that of a girl, intelligence quotient 117; and in the colored group the second highest intelligence quotient was that of a girl, intelligence quotient 101.

The means for the two groups were:

### White

Mean chronological age, 6 years, 6 months.

Mean mental age, 6 years, 1 month.

Mean intelligence quotient, 95.6.

### Colored

Mean chronological age, 6 years, 9 months.

Mean mental age, 5 years, 7 months.

Mean intelligence quotient, 83.0.

The average for the colored group was affected by the test results of a brother and sister, aged 10 years, 4 months and 9 years, 3 months, respectively, whose intelligence quotients of 61 and 56 tended to lower the average for the group.

The white and colored groups seem very evenly matched chronologically. There is a difference of 12.6 points between the mean intelligence quotient for the white and colored groups. No explanation is offered for this difference.

Neither group included any serious behavior problems, though mild personality difficulties were found among both colored and white. Four children in the colored group (two boys and two girls) were enuretic, but no other difficulty was apparent. One colored girl was found to be excessively withdrawn and not popular with her classmates. Another girl was enuretic, suppressed and emotionally under-developed. A colored boy was found to live in a dominant mood of insecurity, inferiority and fear, and showed a tendency to steal lunches from the other children. Despite their difficulties, these children were not disciplinary problems and were considered to be making a fairly satisfactory adjustment at home and in school.

Only one child of the white group (a boy) was enuretic. He was also self-conscious and nervous and displayed introverted tendencies, together with strong social suggestibility. Two boys of the white group were found to be excessively timid and withdrawn. One boy was reported as given to fighting readily and tending to pick on other children. Another boy was markedly egocentric, was over-protected at home, lacked self-confidence, and was given to temper-tantrums. Another boy presented congenital brain anomalies, was very shy, and was constitu-

tionally physically inferior. A girl showed slight neurotic tendencies and was too self-satisfied. A boy, the most intelligent child found in either group (intelligence quotient 127) was found to be very nervous and seemed unable to work or play well with other children. He tended to cry easily and to run to adults for protection, rather than to defend himself. These personality difficulties found among the white group were not considered to be serious maladjustments and none of the children presented disciplinary problems.

It might be mentioned at this point that the boy representing the highest intelligence quotient of the colored group was found to be of adaptable personality type, a little oversensitive, but popular and sociable.

All the children of both groups were considered to be essentially "normal" children, and at the time of the present writing many of the slight difficulties mentioned had lessened or disappeared.

### PART II

Statistical treatment of results was not feasible, since only twelve children of each group could be chosen for comparative study of first and second test results, and of the results of verbal and non-verbal tests. The findings presented are believed to be indicative trends for the group as a whole, but the numbers (twelve in each group) are too small for any definite conclusions to be made.

A comparison was made between the results of the Stanford Binet obtained when the children were first examined and the Stanford Binet test results obtained in the second year of the study. In the case of each child, at least a year had elapsed between the first and second tests.

Both white and colored groups showed slightly higher mean intelligence quotients than were obtained for the total white and total colored groups, as follows:

| Mean intelligence quotient for twenty-three white children: | Mean intelligence quotient for twelve white children (first Stanford Binet) | Mean intelligence quotient for twelve white children (second Stanford Binet) |
|-------------------------------------------------------------|-----------------------------------------------------------------------------|------------------------------------------------------------------------------|
| I. Q.=95.6                                                  | I. Q.=96.5                                                                  | I. Q.=98.1                                                                   |

| Mean intelligence quotient for thirty-four colored children: | Mean intelligence quotient for twelve colored children (first Stanford Binet) | Mean intelligence quotient for twelve colored children (second Stanford Binet) |
|--------------------------------------------------------------|-------------------------------------------------------------------------------|--------------------------------------------------------------------------------|
| I. Q.=83.0                                                   | I. Q.=84.9                                                                    | I. Q.=85.1                                                                     |

Both white and colored groups showed a slight increase in the mean intelligence quotient for the second test as compared with the mean intelligence quotient for the first, the white group showing a greater gain than the colored. Some gain might be expected, for the stimulus of school work and group activity might be expected to aid in the development of the children's native capacities, as well as in the development of their personalities. They were apparently much less timid and shy when examined for the second time than on the occasion of the first examination, and were less inclined to "give up" without at least making some attempt at responding to a question.

Although the difference between the average intelligence quotient obtained for the group on the first Stanford Binet and the average intelligence quotient obtained for the group on the second Stanford Binet was slight, the individuals composing the group varied in intelligence quotient from the first to the second test by a range of from 1 to 17 points in the case of the white group, and by a range of from 1 to 14 points in the case of the colored group. The average discrepancy per individual on the first and second Stanford Binet test was 5.7 points for the white group and 6.1 for the colored group. The two groups seem comparable both in respect to average gain in intelligence quotient and in the amount of individual variation in intelligence quotient between the first and second tests.

The two children showing the greatest individual differences in their first and second tests afford striking comparisons. Both are boys and both were between seven and seven and one-half years, chronologically, when the second test was made. Both were considered normal in every respect, were well-liked by their classmates and were very well thought of by their teachers.

The white boy obtained an intelligence

quotient of 85 on the first test, but the examiner felt that the rating was too low for the child displayed superior self-criticism and seemed more intelligent than the intelligence quotient indicated him to be. On the second test, a year later, his intelligence quotient was 102. He was reported by his teacher as intellectually "keen" and as having shown remarkable improvement in his school work.

The colored boy obtained an intelligence quotient of 99 on the first test. There was very little scattering, his responses ranging from the five year through the seven year levels. On the second test, a year later, his intelligence quotient was 85. The scattering had increased, his responses now ranging from the four year through the eight year levels. He had gained but one month in mental age in a year's time. Each time he was tested, he seemed alert and made a very favorable impression; but at the time of the second test he was considered by his teacher to be lazy and restless, disliking to study and wanting to spend all his time in play.

A comparison of the results of the second Stanford Binet and the results of the Arthur Scale, Form I, was made. The Arthur Scale is a measure of manual ability. It measures ability to deal with concrete material. The well-rounded individual should display normal ability in dealing with concrete things as well as ability in dealing with symbols and abstractions. Often an individual is equally or nearly equally endowed with both types of intelligence, though he may be somewhat better endowed with one type than the other. Striking discrepancies in either direction between the two types of abilities call for serious consideration when planning an individual's educational or vocational preparation.

The Arthur Scale is a series of performance tests, each of which yields a raw score that is converted into points by means of a table. The point values are totalled and converted into mental age, and the intelligence quotient is then calculated. Dr. Arthur found that results obtained with this performance scale agree almost as closely with the Stan-



ford Binet Scale as Stanford Binet intelligence quotients agree with retests on the Stanford Binet Scale. The Mental Hygiene Clinic has used this performance scale very extensively for four years, and has found that the results obtained correlate well with the results of the Stanford Binet, although great individual variations are sometimes found.

As compared with a mean intelligence quotient of 98.1 on the second Stanford Binet test, the group of twelve white children who had also received the Arthur Scale at the time of the present writing were found to have a mean intelligence quotient of 100.5 on the Arthur Scale. The average discrepancy per individual between the second Stanford Binet test and the Arthur Scale results was 6.7 points, though the individual variation in intelligence quotient on the two scales was from 0 to 17 points. The group of twelve colored children tested by both a second Binet test and the Arthur Performance Scale at the time of the present writing showed a mean intelligence quotient of 86.2 on the Arthur Scale, as compared with a mean intelligence quotient of 85.1 on the second Stanford Binet. The average discrepancy per individual on the second Stanford Binet and Arthur Scales was 7.1 points, though the individual variations on the two scales was from 1 to 18 points.

The results of the two scales are comparable. Both white and colored groups tended to rate somewhat higher on the non-verbal Arthur Scale than on the verbal Stanford Binet. There was a difference of 13.0 points between the mean intelligence quotient of the white and colored groups on the Stanford Scale, and a difference of 14.3 points between the mean intelligence quotient of the white and colored groups on the Arthur Scale.

Our findings are in accord with Dr. Arthur's conclusion, although there was less difference between the mean intelligence quotients on the first and second Stanford Binet tests for both the white and colored groups than between the mean intelligence quotients on the second Stanford Binet and the Arthur Scale.

## CONCLUSION

As previously stated, no conclusions are attempted in this report. Later findings are expected to yield to statistical treatment.

Certain similarities were observed, however, between the white and colored groups, as follows:

1. Similarity in the average chronological age of the two groups—six years, 6 months for the whites and 6 years, 9 months for the colored.

2. Similarity in the type of mild personality difficulties observed among the children of both groups, and the generally satisfactory adjustment made by the groups as a whole.

3. Similarity in the increase in the average intelligence quotient from the first Stanford Binet to the second. Both groups showed a slight gain in average intelligence quotient at the time of the second test.

4. Similarity in the range of individual variation in intelligence quotient from the first to the second test.

5. Similarity in the increase in average intelligence quotient from the second Stanford Binet to the Arthur Performance Scale. Both groups showed a slight tendency to rate higher on non-verbal than on verbal tests of intelligence.

6. Similarity in the range of individual variation in intelligence quotient between verbal and non-verbal tests.

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## RECREATION—A FACTOR IN THERAPY

AUDREY D. DENISTON

Chief, Social Service Department  
Mental Hygiene Clinic, Delaware State Hospital

To a case worker, any treatment program for children is incomplete and inadequate if planned without proper consideration for recreation. Play development is so closely allied with the physical and emotional growth of the child, that one cannot be considered without the other. The following case story is presented to show the value of recreation in helping to work through one situation that came to the attention of the clinic.

### PROBLEM

Jack, a white boy nine years three months of age, was referred from the school because

of stealing and truancy. Money had been taken from the home in various amounts; it had been definitely traced to the boy and he had been punished by whipping for each offense. Finally, a certain amount was missed from the school cafeteria and when discovered Jack left the building, went to the railroad station and boarded a train for a nearby city. There, he wandered around until hungry, then approached a railroad official with an elaborate story about being accidentally separated from his father who had returned home without him.

There had been former trauancies of a similar nature. Once he had followed a circus to an adjoining state; when apprehended, gave wrong identity for relatives, spent the night in a police station and escaped from the police when they were taking him out for breakfast the following morning.

Investigation revealed other problems—enuresis and disturbing behavior in school. The teacher of 3B grade where he was enrolled described him as talkative, restless, disobedient, stubborn, quarrelsome, dishonest: "hit and punched" other children in the room, so, to be less annoying, he was placed apart from them.

#### PERSONALITY

Friendly, suggestible, aggressive, talkative, easy to engage in conversation. Cheerful, unselfish, kindly—assisted willingly with tasks about the house. Sometimes stubborn following attempts at discipline. Imaginative, curious, "craved travel, liked to find out things for himself." Interested in music; one ambition was to learn to play the violin. Fond of reading; enrolled in the library of his own initiative. Also registered, without the knowledge of his parents, with a publishing concern and was so successful in selling magazines that he won several prizes. When it was learned that he was under age, the contract was revoked and the customers transferred to another boy. His interest was then partially satisfied at least, by selling articles of food prepared by the mother to supplement the family income in periods of unemployment.

#### HOME AND FAMILY

The home, drab and meagrely furnished, is located in a congested urban district where there are no neighborhood recreational facilities. Formerly, the family lived in a rural

community and Jack definitely expressed his preference for that location as he knew people better there. Financially, the family's existence has been on a marginal basis, and during periods of unemployment a relief agency has furnished food.

The parents are in good physical health. Although not examined, they are no doubt of average native intelligence; their education has been limited but adequate for the performance of their work and on a par with their associates. An atmosphere of carelessness and confusion, but not absolute neglect, prevails in the home. Discipline is obviously inconsistent, but there is present an affection for the children and a strong family bond.

Jack is the only boy; he and his twin sister are the oldest of five siblings. The sister, though actually "twenty minutes" younger has always been the larger. She has looked and acted older; is a grade advanced in school, though by psychological examination on the Stanford Binet, has an Intelligence Quotient of 84, three points less than Jack's. In manner, she is quiet, serious, reliable, and has never been considered a problem in the home. The next child, seventeen months younger, is in the same class as Jack and has a higher mental age, her Binet I. Q. being 104. The fourth child has a speech defect and is retarded intellectually; on the Binet has a rating of 55. The youngest, a girl of three, resembles Jack in appearance and manner; she is his favorite; he readily admits his preference for her and said after his last truancy that he expected to take her with him the next time he went away.

To add to the confusion in an already overcrowded home, there is living a young woman and her five-year-old girl. This woman in exchange for maintenance does the housework and supervises the children in the absence of the mother when employed.

#### CLINIC INTERPRETATIONS

Jack is a friendly, co-operative child who talks freely and spontaneously. He is inclined to fabricate, to show free imagery, and the ability to get the most out of the situations. He is hyperactive but not to the point that is considered abnormal. The child is well extraverted, socially inclined, and the type that needs his time well-planned in order to prevent the possibility of his hyperactivity and

sociability from leading him into difficult situations.

Psychological examination reveals him to be slightly retarded intellectually, the extent of retardation appearing as equal on tests of both verbal functions (Stanford Binet Test—I. Q. 87) and non-verbal functions (Arthur Performance Test—I. Q. 85). Actually he is about one year retarded mentally; this degree of retardation, however, is not very extreme, for it is found in fully twenty-five per cent of children of his age. In school, he is approximately a year behind the average child of the same age, but with respect to his intellectual capacity, his grade placement is correct. His Achievement Quotient of 104, which is simply the educational age (as determined by a standardized test) divided by the chronological age, constitutes further evidence of his correct grade placement and indicates that he is doing as well in school as could rightfully be expected.

#### TREATMENT

Treatment is not recorded by steps, but may be said to have begun in the first interview with the mother. She was concerned over the boy's behavior, but a certain amount of resistance to the clinic had to be overcome, as she had formerly not received the assistance hoped for when she asked that the defective child in the family be placed in public school. Her attitude toward the school was co-operative, and since the school had suggested the examination, she agreed to the plan, but somewhat indifferently and unenthusiastically.

The first appointment was not kept; the following week when the child was brought to the clinic by the father, he explained that Jack had gone to the city where he had truant-ed previously and had been kept there several days in a detention home. Following return from a truancy there was always a certain amount of glamour surrounding the episode; both the children and adults who knew the boy made him feel somewhat of a hero and he liked this attention. Following the clinic's examination, the father had definite plans which he later carried out; namely, to arrange for visits with various relatives which would give a change and also take the boy away from the home atmosphere. Jack enjoyed most his visit to relatives in the coun-

try. At the seashore, where the family had their recreation at public amusement parks, he took his clothes, ran away, was located in a movie house at the edge of town and returned home. Later, he was again sent to relatives in the country where he remained until time to enter school.

These various visits occupied a period of two months. He re-entered school at the beginning of the term, and seemed to get along very well for two weeks; then he truant-ed again—this time to a city more than a hundred miles away and was returned by an agency.

It was at this stage that the clinic became a definite part of the treatment plan. Until then contact had been maintained but not forced by the social worker. Recreation had been discussed and when the mother asked for help, concrete suggestions were made and a plan carried through for a free membership in a boys' agency that could furnish varied recreational activities. Jack was first accepted on trial, as it was thought that he might be too aggressive; much sooner than was anticipated he had made an excellent adjustment under supervision. Although the distance from the home is considerable, he has never missed an opportunity to go; is usually the last one to leave and is most enthusiastic about all the activities.

In addition to participation in this agency, a church organization has furnished some outlet for him in a recreational way. Trips to the parks and the zoo have also occupied some of his time when not in school.

There have been no trancies in eight months except on one occasion five months ago; after leaving Sunday school one day Jack said that he was going for a walk and did not return until seven p. m. The following day the mother learned that he had gone for a boat ride, but there was little said about it in the home; he was not punished and there have been no repetitions of the offense. The father thinks that there has been a change and on the whole the boy's behavior is more acceptable. The mother is apprehensive for fear he may again truant, but she does not express her fears to him. On a few occasions the boy has picked up small amounts of money in the home, but he has been watched carefully and when discovered, has admitted tak-



ing the money and returned it. There has been evident some change of attitude on the part of the parents; they call less attention to his misbehavior and have substituted other forms of discipline for whippings, since they decided that this method was not effective. The enuresis has improved without direct treatment.

From the standpoint of the school, Jaek is considered to have settled down considerably. There has been no further stealing; although still mischievous and in need of supervision, there has been a noticeable change. Now, if kept in for any reason, the teacher reports that he reads and uses his time to a good advantage—in fact, much better than many older boys.

There was nothing of the paternalistic philosophy of ease work in meeting this situation. No effort was made to plan for the entire family and an attempt to secure special class placement for the younger defective child was not possible because of lack of facilities in the public schools. Success in the treatment is not considered a complete change, but a more acceptable behavior on the part of the child in the home, the school, and the community. Treatment was merely followed at the level of the child's interests and success probably attributable to his own personality assets, which found expression and the outlet needed at his age. The dominant interest of a nine-year-old boy is in the sphere of physical activity; it is at this age that imitative play is at its height and interest centers about immediate objects in the environment.

## THE EFFECT OF ECONOMIC SECURITY ON MENTAL HEALTH

ZILPHA M. GUILFOIL

Chief, Social Service Department, Delaware State Hospital

A psychiatrist, in attempting to answer the question "Why do some people become insane under certain emotional or environmental conditions when others are unaffected?" compared the human race to a forest of trees. He said these trees, growing side by side from the same soil and with the same amount of protection, differed greatly in degree of stamina, although to all outward appearances they were identical. But let a storm sweep through the area and, follow-

ing it, it would be found that many trees remained erect, firmly rooted in the ground and sound, while others were leveled to the earth or twisted and maimed beyond further usefulness. Accepting this rather superficial answer and without going into the underlying causes of why some were destroyed and others not, but using this as an illustration, we can more clearly understand, why, in the wake of the storm of depression that swept over our country, we are finding so many men and women who are developing psychoses.

Economic security is the most prized of all the material achievements of man. With economic security at his command, man is confident, poised and fearless. The satisfaction that he feels in providing amply and fully for his family affords him sublime self-confidence and contentment. He is ready to meet other problems fearlessly. He has a zest in life that assures sound sleep, good appetite and enjoyment in the participation of all his activities. Deprive him of this feeling of security and he becomes fearful, nervous and hesitant. His mind is filled with anxiety to the exclusion of all healthy and stimulating thought. He grows irritable and illogical and the problems that confront him seem impossible of solution. His life becomes a reproach to him and he loses faith in himself and even in life.

In the past year the story of many of the admissions has been the same. Wives, with tears in their eyes, tell how their husbands were confident at first that the situation was only temporary, how their men were sure that it would only be a few months before they would again be at work and the picture develops—of savings carefully hoarded, being withdrawn and dissipated in providing the barest necessities of life, of the fruitless search for work, of the children being deprived the common comforts of the well ordered home, of unexpected situations arising such as illness or death with no money to meet them, of how their husbands, always kind and thoughtful before, become irritable, suspicious and harshly critical, then the apathy, the brooding, the withdrawal from all the normal activities of the home

and family, and finally the complete mental breakdown which leads to the admission to the hospital.

Economic insecurity strikes not alone at the man, the head of the family, and the wage earner, but at the woman as well for she, being the center of the home and family, feels as poignantly as the man the terrible effects of poverty and idleness. She is profoundly affected by the fact that her children are denied all the factors that make them the happy, healthy normally adjusted individuals they are meant to be and her mother's vision looks forward to the years that will surely indicate in her children's development how badly they have been affected by this period in their lives. So we have housewives, too, breaking under the strain of trying to combat the terrible effects of economic insecurity.

Nor are its effects confined solely to mature and established men and women but strike at youth as well. Young people who are just starting out to build up their lives, leaving school with eagerness to enter the battle of life, find their energy, hope and courage useless instruments to battle against idleness and unemployment. With all their plans shattered, they too, retreat into a haven of their own making and become introspective and sullen or restless and indifferent and develop neuroses as definitely as do their elders.

The factor of depression not alone plays its part in developing insanity but it delays the curing of mental ills otherwise brought about. When these particular classes of patients have been treated until their minds are again functioning normally, and it is possible to discharge them from the hospital, a new problem confronts them. If they can be employed they will regain their courageous outlook on life. Regular hours of work will restore their stability of thought and action and they can be expected to remain cured. But return them to homes that are barely and inadequately supported by charity and they are immediately adversely affected by the existing conditions. The social worker, calling upon these cases, hears the same reiteration of despair. "If he could

only find work, I'm sure he would become more cheerful and natural."

As for the housewife, what use is it to build up her depleted physical state, restore her mental poise, bring about a cheerful attitude of mind, all possible when she is secluded in a hospital away from her distressing problems, only to return her to such conditions in the home that her old processes of emotion will be set up again?

To illustrate the frustration of hope of recovery in such cases we would like to use a concrete illustration. Mr. A developed a psychosis whose cause was on a physical basis. He was treated for the physical condition, his mind became normal and before he returned home, he became a useful worker about the hospital. He had been employed for eight years with one firm and had a record of work faithfully performed. He had a family of three children and his wife had courageously been earning a precarious living for them while he was in the hospital. She had been able to provide food for her family but had not earned enough to keep up the interest payments on their little home. The mortgage company agreed to forestall any action until the patient returned home. He was confident that he could resume work in the plant again and his wife planned to continue her work although it was both arduous and poorly paid, so that the patient could apply his earnings on the unpaid interest of the mortgage so that their years of painful saving for a home would not be lost. The man, however, was not given re-employment despite his doctor's statement that he was able to go to work. The firm excused their action on the ground that he would be considered a "hazard." The patient pleaded to be taken back on any reduction in salary the firm saw fit to make. The social worker of the hospital pleaded also, trying to convince the superintendent that the patient's mental health would be determined by his decision, a representative of a social agency who had stood by his family when the patient was in the hospital giving, not relief, but advisory counsel, also pleaded but in vain. The company was adamant and the patient, finding it impos-

sible to obtain work elsewhere, was obliged to remain at home in idleness with his bitter thoughts.

He was sensitive and proud and the thought of his wife trying to earn the living for the family and of his firm's, to his ideas, unjust treatment of him, was too much for his newly acquired mental stability and he eventually had to be returned to the hospital. A number of other cases equally as graphic and tragic could be cited.

While the depression represents forces that cannot easily be destroyed, something can be done in individual cases to mitigate its terrible impact on them. We can salvage some of these wrecks from the storm. Old established firms where former employees have broken down mentally after their enforced lay-offs from work, could make a special effort to give these patients work when they leave the hospital. Even if they had to actually make a place for them the cost would not be excessive as the cases in individual firms would be relatively few.

A greater effort should be made to find employment for our youth, especially those who have succumbed to the difficulty of finding work and are now valiantly making an effort to recover their mental health and rehabilitate themselves. A concerted community effort should be made to try to seize the hopes and the enthusiasm of youth and weld them into something hopeful and productive.

"Made work" has an ominous sound but by "making work" for these victims of economic insecurity, their reason can be restored and they can again become self-respecting, adjusted citizens in the community, it will be a worth while investment, paying tangible dividends in reducing the cost of hospital care and the cost of support to the families of these patients, while the far greater intangible dividends will be mentally adjusted individuals and normal home standards for their families bringing peace and security to its members and insuring the future of the children in these homes.

## SOME CLUES TO TREATABILITY FROM THE STANDPOINT OF THE SOCIAL WORKER

ADELIA SMITH, M. A.

Psychiatric Social Worker, Mental Hygiene Clinic  
Delaware State Hospital

Until recently there was little idea regarding the treatability of the clients of a Social Agency or patients of a Mental Hygiene Clinic; there was only experimentation; even now there is not much more. Not so long ago we went through a period when any social worker would feel quite justified as she closed a case because the family "would not co-operate," even though doing so would mean that the undernourished baby might thereby be physically handicapped permanently or that Johnnie's or Mary's last chance for help in their social adjustment at the turning point in their lives, was thus being withdrawn. Then came a stage when we went to the other extreme. If a family failed to respond, it was all the case worker's fault. Not that we failed to recognize the fact that all human beings are fallible; one hundred per cent success was not expected even of the best worker; but the fact remained that we were firmly convinced that every patient could be helped if only the right worker who used the right technique were available. Now the whole problem of treatability is receiving more rational consideration and a philosophy regarding it is beginning to emerge. We are not yet sure of ourselves to feel justified in stating that a case is untreatable without trying, but it is possible to select the cases which are most certain to respond and thus justify the time spent on them. With a limited staff and unlimited case loads this is extremely important. We are also learning to utilize certain clues to treatability as a guide in our approach to our patients and their families and also in determining on how deep a level treatment of the individual should be attempted.

First, must be considered what the source of referral means to the particular patient, or to his parents if the patient is a child. Suppose the patient is referred to the clinic for study by the court on the basis of an



arrest which he (or his parents if he is a child) feels was entirely unfair and unjustified. The hostility to the court or the officers who represent it, may be carried over into the attitude toward the clinic staff. The prejudice thus brought to the situation may prove difficult if not impossible to break down. Quite different would be the attitude of the patient and his family if referred to the clinic by the beloved family doctor, who has held their confidence over a long period of years and who has imbued them with his own faith in the ability of the clinic staff to study the problem honestly and give whatever help is indicated and within their power. Still different might be the attitude of the person referred by the parish priest who may come to the clinic feeling obligated to completely unburden himself as though to a "father confessor." If a child is referred by the school because of unsatisfactory behavior the parents' attitude toward the school authorities will color their first response to the clinic. If they feel that their child has been unfairly treated they are apt to resent clinic referral as another way in which they have been discriminated against. How different is the attitude of the parent who has confidence in the school authorities and who is brought by them to accept clinic referral as another indication of their desire to help parents in meeting the problems of their children. In each case it is urgent that the social worker learn as early in the interview as possible what attitude the individual has toward the source of referral. If this is favorable, resistance to treatment may be lessened by emphasizing the clinic's role as assistant to the source of referral. If the attitude is unfriendly, it is most urgent to make very plain to the individual that the clinic is an entirely independent agency; that it is in no wise influenced by the referral source; and that the clinic staff is interested in the patient as a person who needs help rather than because of the referral. It may not be possible to entirely break down the hostility which the patient and his family bring to the clinic because of the referral and in some cases it may permanently handicap treatment.

All case workers have dealt with the individual who is so "protective" regarding his own rights and privacy that he cannot bring himself to give necessary social data or to consent to having necessary references interviewed. All normal people are "protective" regarding certain things in their personal life and the proverbial ghosts in the family closet. However, if a person is unduly protective, and if the worker's technique is not the cause, the fact must be faced that the person who cannot co-operate in the social investigation would very likely not be able to do so in a treatment relationship. If the social workers and therapist cannot break down this tendency there is little hope for successful treatment.

It was once considered very hopeful for treatment if the patient, or his parents if the patient was a child, had even a slight degree of "insight" into the cause of the difficulty; if they recognized and admitted that they had any part in creating the problem. It is now recognized that an element of dissatisfaction with the situation must accompany "insight" if any progress is to be made in treatment. It may become a part of the social worker's "job" to create that "dissatisfaction," either directly or through influencing others. A person who is given to dramatizing his problems may have a good deal of "insight" and yet be too pleased with himself to do anything about it. As an example take the little crippled boy whose plaintive, childish appeal brought him so much satisfying attention that, up to the time he reached high school he even refused to attempt to wear an artificial limb. At this point in his life he found a change in attitude toward his defect, became unhappy about it and was extremely responsive to treatment. In an effort to overcome his handicap, he became so efficient in sports that he was later known as the "crippled athlete." For successful treatment it is important to gain an entree while dissatisfaction is strong enough to motivate a desire for change. If this is allowed to go on the patient may develop a "satisfaction in dissatisfaction" which becomes a way of escape—"no use to try, never get a square deal any way"

etc. The social worker, in following the patient's social adjustment, may be in a position to know at what point he will be most responsive to treatment. If the patient's behavior is meeting such a fundamental need that no substitute that is equally satisfying can be provided there is little hope of successful treatment.

For successful treatment it is important to have a "key person" in whom treatment may be centered (if the patient, himself, cannot be given direct treatment) or efforts are apt to be scattering and little will be accomplished. The case of a child whose problems have been produced by adult mishandling is much more hopeful for treatment if discipline is controlled by one person who is open to treatment suggestions than if there are parents, grandparents, and possibly older brothers and sisters in the home, no one of whom has dominant authority and all of whom respond to treatment suggestions with varying degrees of hostility, indifference, interest, and co-operation. In the course of the social study the social worker may be able to locate such a person and enlist his co-operation in treatment.

Behavior problems in children may be the direct result of marital conflict which has led one or both parents to identify the child with the hated mate and thus feel justified, more or less consciously for abnormal hate and constant criticism. It is important for treatment that the social worker uncover this situation if it exists. Treatment may center in a direct approach to the marital problem if there is any indication that it might be solved, or by the indirect approach of trying to break down in the parent the identification with the hated mate. Failing in both, treatment is hopeless unless the patient can be taken from his parents, or is of an age and disposition to respond to direct treatment which will sufficiently free him from his parents so that he can accept unjust treatment without emotional upset or retaliating with overt behavior. One may also find cases of marital conflict that the child is not particularly hated by the parents but is simply used as a "pawn" with which to punish each other. Father punishes mother by whipping the child for some trivial offense; mother retaliates by encouraging the

child in disregarding father's wishes. Which ever parent the social worker approaches first, the other one will feel that she is siding against him. Any effort to establish rapport with both parents almost invariably leads to both becoming suspicious and in the end losing confidence in the case worker. Unless the child can be removed from the home or is amenable to direct treatment, little can be done for him.

The native intelligence must be considered in treatment. It was once thought that a high psychological rating was an indication that the patient would be especially responsive to treatment. Experience does not bear this out. The very bright may be so conscious of their superiority that no desire for change can be aroused. Conversely the dull or high-grade defective may be very responsive because they may be treated as outcasts and hence particularly in need of, and anxious for the relationship offered by the psychiatrist or social worker. For the low-grade defective institutional placement may be the only way of securing any educational advantages or social outlets. Simply recommending placement to the parents is usually not sufficient. To cling to a defective child is a perfectly normal reaction and placing him away from home may be extremely painful to the parents. It may take a year or more of intensive case work before they can accept the wisdom and necessity of such a step but their willingness and co-operation are necessary for the happy adjustment of the child when he does go. With defectives the case worker may carry a particularly large share of the treatment responsibility as it is usually possible to accomplish more by influencing the attitudes of parents, teachers, and others in the community so that the patient will have more guidance, protection, and understanding than it is to try and change the patient's reactions. Authorities differ as to how much can be accomplished in direct treatment of even a high-grade defective. Since treatment emphasis is shifting away from a simple giving of concepts to utilizing the influence of relationship, it is possible to get better results with this group than formerly. Rather than making the decision as to treatability on the basis of the intellectual rating only, the emotional factors that the

patient and his parents bring to the situation must be considered as well.

The treatment clues outlined above may seem to be primarily the concern of the psychiatrist. On the other hand, if the patient's reaction to the source of referral colors his response to treatment, how much more will his relationship with the social worker who is often the first representative of the clinic with whom he has contact. In a very real sense treatment begins with the case worker's first effort to gain rapport in securing the social history. It is then that she must break down or use the patient's identification of the clinic with the source of referral; she must determine her approach and relationship on the basis of the patient's response and what she has already learned of him, etc. An awareness of treatment clues is necessary in order to secure and incorporate them in the social history for the use of the psychiatrist. This also helps in securing a history that is sufficiently detailed without undue strain to the patient and also in giving him confidence in the clinic without encouraging him to hope for the impossible.

In the changing technique of case work we are learning that the things we do to and for patients are less effective in treatment than the things we enable them to do for themselves. We are learning that while the "managerial type" of social work may have its place in the care of dependent children and adults who are actually sick or mentally defective, its application must be strictly limited. Far more important in the social worker's technique is an awareness and response to clues to treatability and a recognition of the fact, that as social workers, we have no "rights" in a case not given by the patient (or his parents if the patient is a child) except the "right to withdraw."

#### **Diabetogenic, Thyrotropic, Adrenotropic and Parathyrotropic Factors of Pituitary**

J. B. Collip, Montreal (*Journal A. M. A.*, March 9 and 16, 1935), presents a review of the investigations on the diabetogenic, thyrotropic, adrenotropic and parathyrotropic factors of the pituitary. The diabetogenic effect of the anterior pituitary is due to the combined action of two substances, one acting on the blood sugar level and the other producing

ketosis. He shows that the ketogenic substance must be distinct from the thyrotropic principle. A close relationship between the pituitary and the thyroid has been demonstrated clinically. It is concluded that the thyrotropic principle found in anterior pituitary extracts is an entity having physiologic properties that distinguish it from the growth factor, the ketogenic principle, the maturity principle and the adrenotropic hormone. The author has noted that the adrenotropic effect tended to be associated with thyrotropic effect but that with further purification of the thyrotropic principle the adrenotropic action became less. There is as yet no satisfactory physiologic test for the adrenotropic principle; for, since the adrenal cortex reacts with hypertrophy after the administration of numerous non-specific toxins, the results obtained on normal animals are not conclusive, and the hormone must always be tested on hypophysectomized animals. On theoretical grounds it is conceivable that certain cases of Addison's disease may be due to primary pituitary failure. Two cases of Addison's disease showed marked improvement when adrenotropic extract was administered. It is, of course, not to be expected that cortical tissue that has been damaged by tuberculosis can be activated by pituitary adrenotropic hormone.

#### **COPY OF SWORN STATEMENT OF CIRCULATION**

May 6th, 1935.

As a requirement of the Code Authority for Periodical Publishing and Printing Industry (A-3), the Business Manager of the Delaware State Medical Journal makes a sworn statement showing the following circulation of the Journal, covering the period from July 1st to and including December 31, 1934:

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Proc. Soc. Exp. Biol. and Med., 1934, 32, 241-245\*



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JUNE, 1935

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(1) J. Amer. Med. Assn. 101, 127 (1933)

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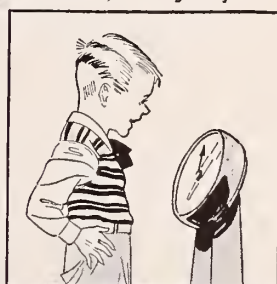
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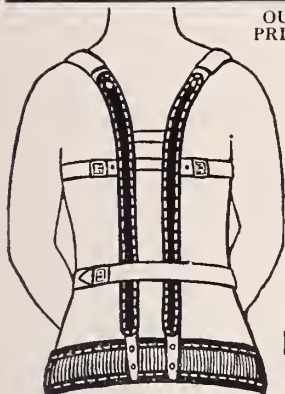
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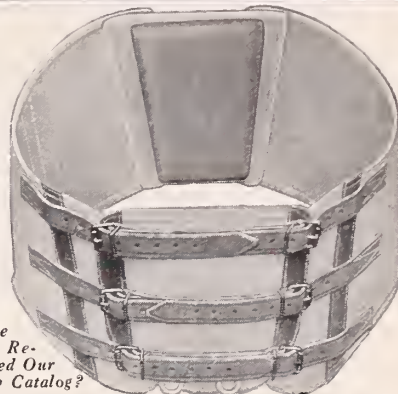
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## ANGINA PECTORIS—ITS TREATMENT WITH INSULIN-FREE PANCREATIC EXTRACT, "TISSUE EXTRACT NO. 568" (DESYMPATONE)\*

JOSEPH B. WOLFFE, M. D.  
Philadelphia, Pa.

A resume of the literature and the results obtained with a pancreatic tissue extract which possesses epinephrine—antagonizing qualities were previously reported. (2) We found it to be of aid in the treatment of angina pectoris and intermittent claudication. We suggested the name "Desympatone" for the epinephrine-neutralizing fraction, which we believe to be responsible for the beneficial effect obtained. This paper reports further pharmacological, chemical and clinical studies made by other investigators, my colleagues and myself.

### PHARMACOLOGY OF DESYMPATONE

Because of the prevalence of histamine and cholin in extracts from tissues the question frequently arises as to the possibility of these substances being responsible for the pharmacologic action of tissue extract. In spite of many published researches to the contrary (3, 4, 5, 6, 7, 8) this is still a common criticism expressed by those whose studies have been incomplete. Our further experiments show that the effect of tissue extract is not due to histamine or choline although variable quantities of both substances may be found in the tissue extract as prepared by the method previously published.

We have shown that we obtain a definite rise in blood pressure when histamine is administered intravenously to rabbits under urethane and ether anesthesia while tissue extract No. 568 causes a drop in blood pressure in the same rabbits. In fact, the pressor

effect of histamine may be quantitatively neutralized by admixture with the proper volume of tissue extract. This we have repeatedly confirmed.

Munch, Quici and I have also shown that acetylcholine administered to dogs under morphine-chloretone anesthesia has a definite depressor effect and neutralizes the pressor effect of epinephrine, similar to tissue extract No. 568. Following the administration of two milligrams of atropine sulphate per kilo. tissue extract No. 568 still possesses depressor and epinephrine neutralizing qualities, while acetylcholine has no such effect. Here we observed that not only does acetylcholine have no depressor effect following atropinization but the rise in blood pressure following the administration of epinephrine may be even greater than before. This has been observed in routine pharmacological experiments in medical schools and may be partly due to the paralyzing effects of atropine on the neurogenic component of the parasympathetic division of the autonomic system, permitting a still greater preponderance of the unopposed sympathetic division. We interpret this to indicate that acetylcholine stimulates the neurogenic component of the parasympathetic division of the autonomic system, because following the administration of atropine sulphate which paralyzes the parasympathetic nerve endings acetylcholine is no longer effective. Tissue extract No. 568, on the other hand, still is active after as before the administration of atropine sulphate. We therefore believe that tissue extract No. 568 acts mainly on the metabolic component of the parasympathetic division of the autonomic system. Further researches are being carried on to shed light on this.

We have shown further that the desired

\*Read before the New Castle County Medical Society, Wilmington, February 19, 1935.

physiological activity of tissue extract No. 568 is due to its Desympatone fraction and could not be reproduced by inorganic salts, non-specific proteins (this was corroborated by Barker, Brown, and Roth), (9) adenosin phosphoric acid, choline and its derivatives or histamine. Daughenbaugh (10) has been making an intensive study of various methods of extraction proposed for the preparation of products of this type from the pancreas, liver, brain, muscle and urine. The details of his investigation will be published in a chemical journal. In his work Daughenbaugh destroyed the insulin by alkaline treatment. He precipitated out whole nucleic acid with alcohol, eliminated protein by precipitation and filtration with the aid of colloidal iron. He eliminated histamine by adsorption on charcoal and extracted choline and choline compounds with ether. The final product which he obtained answered the pharmacologic test of the originally described "Desympatone."

Recently Rabinowitz (11), working with tissue extract No. 568 pointed out the possibility that it also possesses a lecithinogenic function. He stated "A lecithinogenic hormone has been isolated from the pancreas which is similar to the action of insulin on sugar, both storing and breaking up lecithin, and acting as the regulatory mechanism in lecithin metabolism." He also showed that a Kraut positive substance which he thought to be choline appears in the urine following the administration of Tissue extract No. 568. We have confirmed his observations. In a later publication we hope to show that desympatone influences many of the other metabolites which play an important role in muscle function.

#### CLINICAL RESULTS WITH TISSUE EXTRACT No. 568

During the last five years, we have treated 356 cases with tissue extract No. 568 who had failed to respond to the usual methods of therapy (Table 1). It was interesting to find that out of 280 cases of angina pectoris, 37 per cent gave a history of intermittent claudication from six months to ten years prior to the onset of angina pectoris.

Two hundred and four cases were treated according to the following method:

In planning treatment for these patients a very important therapeutic principle must be kept in mind. The constitutional make-up of individuals varies greatly. Although they are often referred to as sympathetic and parasympathetic individuals, we will here consider them as agitated and inhibitive types, in order not to complicate matters. The members of the agitated group are jumpy, energetic, flare up easily, are somewhat aggressive, and frequently impatient. They are creative, promoters, and subject to attacks of angiospastic disease at a comparatively young age.

The inhibitive type are by contrast deliberate, easy going, and passive. They can look upon human achievements without envy. Needless to say there is no line of demarcation between these two groups, although in daily practice we can learn to recognize these two types without any difficulty.

In all cases it is important:

1. To stop the attack of pain either by giving 1, 100 grain nitroglycerine, or amyl nitrite.
2. Adjust the individual's physical activity to his diminished capacity.
3. Advise him to rest as much as possible and institute a change of environment wherever advisable.

Further treatment must be considered separately for the two groups.

#### GROUP 1 (agitated).

(a) Soft diet, rich in calcium and easily digested foods.

(b) Daily injections of 1 to 2 c. c. (10 to 20 units) of insulin-free Tissue Extract No. 568, should be administered for at least 12 doses. It is best to keep the patient at rest during this period of treatment. Following this the same amount may be administered every second or third day until the attacks subside. Then give 5 grains of insulin-free pancreatic extract, or whole pancreas, by mouth, t. i. d., preferably a few hours after meals.

#### (c) Rx

Theobromine, sodili salicylas

(or any other purine derivative),

Acetyl salicylic acid

Gr. V

Gr. V

Phenobarbital Gr.  $\frac{1}{2}$

M. Ft. caps No. 1

Sig: one capsule, t. i. d.

To be taken for many months.

GROUP 2 (negative or inhibitive type).

(a) An alkaline ash diet, low in calcium, mainly consisting of fruits and vegetables, seems to be best.

(b) Twelve injections of insulin-free tissue extract No. 568, three to 5 c. c. (30 to 50 units) daily and then every second or third day until the attacks subside. (Note that the doses in these cases are much larger). Then give 5 grains of insulin-free pancreatic extract or whole pancreas, by mouth, t. i. d., preferably a few hours after meals.

(c) An alkaline sedative and laxative mixture, preferably one which contains a great deal of potassium.

At times good results are obtained in this group by the use of quinine sulphate, two grains, and iron ferrocyanide soluble, two grains, t. i. d.

In seventy-eight of these cases the results were most striking. They have been entirely free from symptoms for one to three years. In sixty-two cases improvement was marked while under therapy; twenty-three returned after a six months period but were again controlled by sedatives. Nineteen were only controlled after sedatives and another course of tissue extract; nine of these died of cardiac failure, three had cerebral vascular accidents resulting in death of one and hemiplegia of two. Both hemiplegia cases became free from angina pectoris (this we believe can be attributed to their inactivity). Eight could only be controlled with morphine. Sixty-four cases did not respond to any form of therapy. Most of these patients suffered from advanced coronary disease with myocardial infarction. Seventeen of this group died suddenly within three months.

Thirty-four cases comprise a most interesting and striking group. In these the attacks of angina pectoris were controlled following the administration of tissue extract No. 568, sedatives and analgesics as guided by their constitutional makeup. (13) Fortunately we later discovered what we believed to be an underlying etiologic factor. Sixteen of this

group were cases of masked hyperthyroidism, in whom thyroidectomies were performed ranging from partial lobectomy to complete extirpation. Eleven were cases of cholelithiasis and cholecystitis in whom cholecystectomies were performed. Five were cases of cardiovascular lues who had repeatedly negative Wassermann and Kahn serological reactions prior to provocative and therapeutic tests. One was a case of focal infection from empyema of an antrum. Following the removal of the noxious etiologic factors thirty-one of these thirty-four cases have so far been entirely relieved of the attacks of angina pectoris and have been able to resume the type of physical work they were incapable of doing for years.

Of twenty-six cases of intermittent claudication, seventeen were entirely relieved. Nine improved while under the treatment but were subject to recurrences; seven of these were later controlled after complete discontinuance of tobacco. However, their capacity for effort was definitely limited. Four of the seventeen cases occurred in pregnant women with unimpaired circulation. They were completely relieved.

In nineteen cases of thromboangiitis obliterans, eleven showed marked improvement with increased capacity for effort ranging from two to five times the amount. In no case was the rubor improved. Seven cases with ulcerations varying in size from a half to four centimeters in area showed a definite improvement in healing of the ulcers. However, in three of these the ulcerations were so advanced and the pain so extremely severe that the treatment could not be carried out any longer and amputation had to be resorted to. On the whole, while beneficial effect following the administration of tissue extract No. 568 on the muscle pain is definite, tissue extract alone seems to be inadequate for the treatment of thromboangiitis obliterans. The treatment with sodium thiosulphate suggested by Rabinowitz (14) in addition to tissue extract should offer more encouraging results.

In eleven cases of diabetes mellitus with occlusive arterial disease of the lower extremities, five cases improved and six did not.

In two cases of generalized arteriosclerosis with paraplegia treated with tissue extract



and analgesics, one was greatly benefited and one showed some symptomatic improvements.

One of the two cases of Raynaud's disease, although well advanced is markedly improved and can attend to his duties.

However he is still suffering slight recurrences during extreme cold weather. The other case failed to improve. It is extremely interesting to note that the cases of thromboangiitis obliterans and intermittent claudication which manifested improvement with relief from pain, did not show any proportionate increase in the vascular pulsations of their extremities or any striking change in the Pachon-oscillometric reading. This bears out the observation of Barker, Brown and Roth (9) that the improvement is not entirely due to vaso-dilatation.

One case of erythromelalgia cleared up entirely.

Two cases of pernio (chilblains) were relieved.

#### MODUS OPERANDI

As we have previously stated we were impressed with the possibility that the Desympatone fraction of tissue extract No. 568 exerts a regulating mechanism on the autonomic system mainly by its antagonism to epinephrine.

It is important for us, as clinicians, to visualize the autonomic or vegetative system as a whole, and not merely as a neurogenic mechanism (Table 2). The metabolic component of the autonomic system really represents the fundamental structure or basis of the mass of the organization capable of autonomous government. This has not been given sufficient consideration and study. The difficulty encountered in the study of the effect of many metabolites is probably the reason for our meager knowledge of this subject. Because of relative ease and accessibility, research has been directed and emphasis has been laid on the neurogenic and endocrine components of the autonomic (vegetative) system. In considering the pharmacology of Desympatone let us bear in mind the metabolic as well as the neuroendocrine component of this important system.

A great deal of evidence has and is being accumulated, particularly through the work of

Sherrington, George W. Crile (15,16) and others to convince us that we must become more cognizant of the latent power of the autonomic or vegetative system. As wisely pointed out by Mayo in a recent paper, (17) local control of muscle should be visualized as part of molecular and colloidal energy commanded by the autonomic system. Cathcart and Benedict estimated that 25 per cent of the energy produced in the body can be expended by tissue under the control of the will, 75 per cent is being used by the so-called vegetative functions of the body of which we are unconseious.

We are acquainted with the somatic reflex are but it is difficult for us to visualize a condition reflex along the autonomic pathway. Crile showed that by doing an adrenal sympathectomy he can check a morbid condition reflex. In this manner a pathological-physiological state is overcome. We look upon angina pectoris, intermittent claudication and allied conditions (as Crile does) as a morbid condition reflex caused, we believe, by nociceptors (Sherrington). (A nociceptor is a receptor of a noxious stimulus.) Among our patients we believe we have dealt with such varied nociceptors that to treat any of them along a single line would be as fallacious as to treat a patient suffering from headache due to sinus infection, eye strain, migraine, intestinal stasis, typhoid fever, brain tumor or meningitis with the same remedy. It is strange that even at this late date statistics on angina pectoris and its treatments are published without considering the possible etiologic factors, or the nociceptors.

In the treatment of these patients it is therefore important to thoroughly search for the etiologic nociceptor and to eradicate it wherever possible. This unfortunately does not always check the morbid condition reflex. In many cases secondary (often minor) noxious influences can re-excite an already existing morbid or condition reflex. Therefore it is important also to desensitize the reflex pathway wherever possible. We can see the practical application of this concept in the analysis of our cases. We believe tissue extract checks medically the endocrine portion of the autonomic reflex by antagonizing epine-

phrine in a manner similar to but not as adequately as Crile does by adrenal sympathectomy. In addition we resort to proper psychotherapy, analgesics and sedatives to desensitize other components of the morbid reflex arc. The best and most permanent results were obtained in those cases where the above mentioned concept was fully taken into consideration while directing therapy (Table 3).

#### CONCLUSIONS

1. The Desympatone fraction of tissue extract No. 568 in addition to its epinephrine—neutralizing qualities, appears to influence the blood chemistry.

2. Desympatone seems to exert its influ-

ence on the metabolic component of the autonomic system.

3. Tissue extract No. 568 should be considered as an effective adjunct in the treatment of angina pectoris, intermittent claudication, thromboangiitis obliterans, Raynaud's disease, erythromelalgia, pernio (chilblains), occlusive arterial disease complicating diabetes mellitus, arterial disease secondary to hypertension and arteriosclerosis, and other allied conditions.

4. Of a total of 356 cases, approximately 70 per cent have shown clinical improvement following treatment with tissue extract No. 568.

TABLE I  
THREE HUNDRED FIFTY-SIX CASES TREATED WITH TISSUE EXTRACT NO. 568

| Diagnosis                                                              | Totals | Treatment                                                                             | Complete Relief | Some Relief | No Relief |
|------------------------------------------------------------------------|--------|---------------------------------------------------------------------------------------|-----------------|-------------|-----------|
| Angina Pectoris                                                        | 42     | Tissue extract only                                                                   | 12              | 11          | 19        |
|                                                                        | 204    | Tissue extract with routine treatment                                                 | 78              | 62          | 64        |
|                                                                        | 34     | Tissue extract with routine treatment and surgical and medical removal of noci-ceptor | 31              | 3           |           |
| Intermittent Claudication                                              | 26     | Tissue extract and routine treatment                                                  | 17              | 9           |           |
| Muscle pain in lower extremities (unknown origin)                      | 13     | Tissue extract and routine treatment                                                  |                 | 3           | 10        |
| Generalized arteriosclerosis with paraplegia                           | 2      | Tissue extract analgesics and sedatives                                               | 1               | 1           |           |
| Diabetes mellitus with occlusive arterial disease of lower extremities | 11     | Tissue extract and routine treatment                                                  |                 | 1           | 1         |
| Erythromelalgia                                                        | 1      | Tissue extract and routine treatment                                                  | 1               |             |           |
| Raynaud's disease                                                      | 2      | Tissue extract and routine treatment                                                  |                 | 1           | 1         |
| Pernio (chilblains)                                                    | 2      | Tissue extract and routine treatment                                                  |                 | 2           |           |
| Thromboangiitis obliterans (with ulcerations)                          | 19     | Tissue extract and routine treatment                                                  |                 | 11          | 9         |

TABLE II  
AUTONOMIC SYSTEM (VEGETATIVE SYSTEM)

| Sympathetic division                                                                                             | Parasympathetic division                                                                                            |
|------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------|
| I. Neurogenic Components                                                                                         |                                                                                                                     |
| a. Sympathetic higher centers.<br>(Not universally accepted)                                                     | a. Parasympathetic higher center<br>(Not universally accepted)                                                      |
| b. Thoracico-lumbar autonomic system<br>(Sympathetic system).                                                    | b. Cranio-sacral autonomic system<br>(Parasympathetic system.)                                                      |
| c. Sympathetic ganglia.<br>Cervical,<br>Thoracic,<br>Lumbar,<br>and their respective ganglionic<br>sub-division. | c. Parasympathetic ganglia.<br>Cranial,<br>Enteric,<br>Sacral,<br>and their respective ganglionic<br>sub-divisions. |
| II. Endocrine Components                                                                                         |                                                                                                                     |
| Epinephrine, etc.                                                                                                | Desympatone (?), etc.                                                                                               |
| III. Metabolic Components                                                                                        |                                                                                                                     |
| Calcium<br>Cholesterin<br>(and untold others still unknown).                                                     | Potassium.<br>Lecithin<br>(and untold others<br>still unknown.)                                                     |

TABLE III

| Types                                 | Causes                                                                                                                                                                                                                                   |
|---------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Psychic noci-ceptors                  | Pessimistic physician.<br>Emotional disturbances.<br>Business worries.<br>Domestic discord.                                                                                                                                              |
| Infectious noci-ceptors.              | Lues.<br>Tuberculosis.<br>Focal infections.                                                                                                                                                                                              |
| Toxic noci-ceptors                    | Tobacco.<br>Lead.<br>Arsenic?<br>Constipation.                                                                                                                                                                                           |
| Metabolic noci-ceptors.               | Thyroid-hypo and hyperthyroidism.<br>Pituitary-hypo and hyperpituitarism.<br>Pancreatic disease.<br>Biliary disease.<br>Vitamin deficiency.<br>Gouty diathesis.<br>Anemias.<br>Hypertensive and arteriosclerotic cardiovascular disease. |
| Mechanical and physical noci-ceptors. | Impacted tooth with nerve pressure.<br>Neoplasm.<br>Sensitive scar.<br>Extreme heat and cold.<br>Trauma.<br>Pericardial scars.<br>Aortic insufficiency (arrested rheumatic disease).<br>Spondylitis.                                     |



## BIBLIOGRAPHY

1. Wolffe, Joseph B., Findlay, Donald A., and Dessen, I.: Treatment of Angina Pectoris with a Tissue Vasodilator Extract. *Ann. Int. Med.*, Nov., 1931.
2. Wolffe, Joseph B.: The Therapy of Tissue Extract (Insulin-free Pancreatic Extract), *Tr. Amer. Therap. Soc.*, pp. 31-43, 1931.
3. Frey, E. F. and Kraut, H.: Substance Stimulating Heart Activity Excreted by the Kidney, *Ztschr. f. Bio.*, **84**: 321-334, 1928.
4. Vaquez, H., Giroux, R., and Kisthinos, N.: De l'action de certains extraits pancreatiques dans le traitement de l'angine de pectorine. *Presse med.*, **27**:277-279 (Oct. 2), 1929.
5. Fahrenkamp, K., and Schneider, H.: Vergleichende Untersuchungen mit einen als Hormocardial Bezeichneten Herzhornonpräparat und einen neuartigen Muskelextract. *Med. Klin.*, **26**:48-50, 1930.
6. Schwartzman, M. S.: Muscle Extract in Treatment of Angina Pectoris and Intermittent Claudication, *Brit. M. J.*, **1**:855-856 (May 10), 1930.
7. Munch, James C., and Wolffe, Joseph B.: Insulin-free Pancreatic Extract, III. The Effect of Norit on the Depressor Constituent of Tissue Extract No. 568, *Arch. Internat. Pharmacodyn. Therap.*, **44**:414-418, 1933.
8. Wolffe, Joseph B., and Munch, James C.: Insulin-free Pancreatic Extract IV. The Effect of Norit on the Heart-Blockin Constituent of Tissue Extract No. 568, *Arch. Internat. de Pharmacol.*, **44**:389-393, 1933.
9. Barker, Nelson W., Brown, George E., and Roth, Grace M.: Effect of Pancreatic Tissue Extract on Muscle Pain of Ischemic Origin, *Tr. Amer. Therap. Soc.*, **33**, 1933.
10. Daughenbaugh, Paul: Personal communication.
11. Rabinowitz, Harold M.: Personal communication.
12. Hyman, Albert S.: Nine Lead Electrocardiogram, *Jour. N. J. State M. Soc.*, 1933.
13. Wolffe, Joseph B.: Angina Pectoris—Its Possible Causes and Treatment, *Pa. M. J.* (Sept.) 1933.
14. Rabinowitz, Harold M.: Newer Concepts on the Physiopathology and Treatment of Thromboangitis obliterans, *Am. J. Surg.*, **21**:260-271, 288 (Aug.), 1933.
15. Crile, G. W.: Phylogenetic Association in Relation to Certain Medical Problems, *Ether Day Address*, 1910.
16. Crile, G. W.: The Biologic Principle Involved in and the Treatment of Recurrent Hyperthyroidism, Neurocirculatory Asthenic and Seutic Ulcer by Operation on the Adrenal Sympathetic System, *Livre Jubilaire offert au Professeur Hartmann*, 1932.
17. Mayo, William James: Importance of a Consideration of the Autonomic Nervous System in Medicine and Surgery, *Livre Jubilaire offert au Professeur Hartmann*, 1932.

## OPIUM—ITS RELATION TO CIVILIZATION AND HEALTH\*

JOSEPH C. DOANE, M. D.

Philadelphia, Pa.

I had a narrow escape from denying myself the privilege of attending this meeting this evening and of enjoying the hospitality of your ancient town and Medical Society. This afternoon a voice from Dover came over my office telephone to the effect that I really was expected here, because the program was built around my paper. As I sat here listening to the learned discussion of the Honorable Chief Justice I realized just exactly what that statement meant. You know how stately buildings frequently surround an empty gallery or corridor. I presume this voice was endeavoring to tell me that I had been placed between two distinguished speakers on the program, and that I was in reality this gallery around which this program was built, this gallery of nothingness.

The other day I heard a man describe a

visit to a hospital for mental diseases. In the course of his travels about the institution he came upon a youngster spurred and booted and apparently equipped to go horseback riding, but he was astride a wooden horse. The visitor commented on the comeliness of the wooden steed and asked him about the horse, but the rider replied that it was no horse at all. The visitor insisted that it appeared to be a horse, but the rider said, "No, it is not a horse. This is a hobby." An inquiry as to the difference between a horse and a hobby brought forth the reply, "You can get off a horse, but you can't get off a hobby."

For some time the question of the reaction of personalities to disease has been something of a hobby of mine, and particularly have I been interested in the story of the effect of narcotics generally on the personality. I have been asked this evening to trace for a few moments the story of opium in its effect upon civilization, in its effect upon world peace, upon the mythology and the literature of peoples, and to comment briefly upon its effect upon individuals whom I have seen.

As we grow older it is difficult to go back to the days when we opened our brownish-covered books on Grecian mythology and saw standing there leaning lazily on his staff with half-closed eyes, and with wings folded impotently at his side, the god of sleep. This god, Somnus, was supposed to dwell in a cave, as you know, beside the River of Death. Before that cave there grew poppies, and from those poppies he distilled the dreams with which he filled the whole night. We all thrilled to the story of Somnus and his extracts of multi-colored dreams from the poppies that grew before his door.

From the very beginning of the mythology of peoples, poppies have been connected in some way or other with dreams, with unrealities, with a sort of evasion of the difficulties of everyday living. So we wonder not that the word "somnus" has some connection with the name of the poppy from which opium is secured. Just as there are families with the names of Smith, or Brown or Jones, so the family papaver, the family of the poppy, has attached to it a number of names: the poppy, *papavera somni ferum*—the sleep-bearing

\*Read before the Medical Society of Delaware, Dover, October 9, 1934.

poppy. The poppies which grow in your backyard and mine are not the sleep poppies; they are the oriental poppy, gaudy red flowers with the black seeds. The sleep poppy is not that of which McRae sang when he spoke of Flanders Fields being peopled with poppies. The opium poppy is indigenous to the Near and Far East.

Opium, as the physician knows it, is the juice of this particular sleep-making poppy. To be sure, the poppies in your backyard and mine could be used for the same purpose, but not commercially so.

The antiquity of the poppy is of interest. Twenty-five hundred years ago Homer spoke of the sleep-producing possibilities of opium. Later Hippocrates and Aristotle, and even a physician in the army of Nero, described the fact that an infusion of the poppy would produce sleep and would relieve pain. Hence, has been known for many hundreds of years the fact which we know today—that pain is relieved by some preparation of the poppy.

Morpheus was the son of this sleeping god, and morphine, of course, is the name of the alkaloid, the derivative, the active principle of opium. But opium has written with a tragic finger on the scrolls of time. It has been a producer of war and rumors of war. It has appeared as a factor in world commerce, in world politics, and certainly has influenced the literature of the world.

It is said that the earliest effect of opium on India, from a commercial and sociological angle, was in about 1600. At the establishment of the Mogul Dynasty in India there began the effect of opium on this country's life which has persisted even to the present.

We read in our histories of the East India Company, and few realize that as early as 1600 Queen Elizabeth granted a charter to "The Governors and Merchants for dealing with the East Indies" under the name of the East India Company, and that for many years that company practically ruled India. In that rule there followed much of extravagance and of corruption, which had to do with the growth and production of and the commercial transactions in opium. That the East India Company, under the rule of Warren Hastings, up until 1856, practically governed

India with an iron hand. Opium furnished the money with which the Government and the East India Company existed.

I have said that opium has been a producer of wars and rumors of wars. It was this same Warren Hastings who is said to have placed a sloop in the harbor of Canton, China, and from thence for decades to have sold opium to the Chinese. But there came upon this boat an honest governmental officer, Commissioner Leu, who dumped overboard some ten million dollars worth of opium. As a result war was declared, which was the opium war of 1848. Later certain treaty arrangements were made by the Chinese, and insisted upon by the English. So that what most people consider as the corrupt Opium Wars of the middle of the nineteenth century had as their cause the commerce in opium with China.

World trade has been affected by opium. Greece, Bulgaria, Egypt, India, Turkey and China export millions and millions of pounds of crude opium annually. Perhaps 50 times as much opium is grown as is needed for medical purposes. What becomes of the ninety-eight per cent of opium which is produced by these countries?

It is said that ten years ago the United States imported about 250 tons of crude opium and that from those 250 tons approximately 30 tons of morphine were manufactured. Almost everyone knows that the dose of morphine is a fractional part of a grain. One can imagine the number of persons that could be normally and medically supplied from some thirty tons of morphine, which in reality would be equivalent to fifty grains a year for each man, woman and child in the whole United States. So it is certain that some illegal use is made of these many other tons of morphine which are actually produced. Let us see, in a few moments, what this is.

Of course the difficulty in the control of the opium commerce has been not only the demand for the drug but the high prices which are paid for it. Many of the nations, certainly the Far and Near East countries, have striven over the past century or more to control the use of opium, but easy smuggling still goes on, as is illustrated by the



story of the old Chinese lady who boarded a boat to Canton with a beautiful cat and five kittens that were later discovered to be very dead, but fully stuffed with morphine; and by the ship, the Elmer Heath, which steamed into Norfolk loaded with 2000 pounds of morphine which had been cleared from Seattle a few weeks earlier, had had a splendid trip no doubt to the Far East, and had returned to Norfolk to unload her cargo.

It is notorious that Japan is the go-between, the half-way house in the traffic of opium in so far as other nations are concerned. Much of the opium smuggled into this country has been first shipped from the United States by way of the Pacific Ocean and has later been returned to the Eastern or Western coast for illegal use.

One might spend many minutes elaborating on international trade relations and on the difficulties of controlling illicit opium traffic; but I must hasten on. Many international conferences have been held in which countries have endeavored to come together in the control of opium; but always that which separates right from wrong, which makes consciences see differently, and which makes it difficult to enforce any controlling legislation intervenes, and that is the dollar. Money has thwarted all of these attempts to correct this evil, and countries, just like individuals, continue to be perverse because of the profits which are inherent in the traffic of opium.

In this country the first serious attempt at control was made in March, 1915, when the Harrison Law, of which we all know, became effective.

At that time I was connected with the Philadelphia General Hospital. I was interested to observe the immediate effects of the enforcement of the Harrison Law, because there came out of the bushes, figuratively speaking, a new kind of person: a person no one suspected existed, and as we looked on this army of persons lo! we observed all sorts of persons there. We saw the high and the low. All professionals were represented: professors at colleges, lawyers, and ministers of the Gospel. These were they who had found it necessary for one reason or another to use

for non-therapeutic purposes the drug which is named after Somnus.

The opium addict was brought to light by the Harrison Law, because no one knew just what to expect of this new legislation and nobody wished to go to jail for having a forbidden drug found on their person.

Today we see few of these people, not I think because the country has purged itself of the illegal use of opium but because the underground channels have been fairly well established for the illicit securing of the drug. Our well meaning but somewhat egotistical police force in Philadelphia would like us to believe, because there is no demand for drug treatment in the city hospital, that the whole city of Philadelphia has been purged of the use of opium. Those of us who know this person, this opium user, are largely of the opinion that simply the procurement of the drug has been made easy and hence none desire to be cured.

I said a moment ago that the attempts on the part of China, Japan and other nations to purge themselves of the social degradation caused by the use of morphine have been largely a failure. The reason they have been a failure I think is because of the economic urge, and because of the fact that, like a hobby you, can not "get off" the morphine habit once you are on it, without help.

I remarked a moment ago that opium has exerted some effect upon the literature of the world. We need not recall more than casually the fact that some of our best known writers, transported temporarily into a new, a dreamy and unreal world, have allowed their imaginations to produce some of the most beautiful literature of which we have knowledge. Moliere, Beaudelaire, Francis Thompson, Bulwer-Lytton, Coleridge, DeQuincey, and possibly Poe, were users of opium for non-therapeutic purposes. A reference to one or two of these. As to DeQuincey: Yesterday I observed in a trolley car a person reading "The Confessions of an English Opium Eater." It is a beautiful exemplification of the finest and purest of English, and still in it are described new sensations, a world which is new to most people. Occasionally the moth does flutter too closely about the flame, and there are those



that only need to know of a vice to become vicious. Weak-minded persons who, having read DeQuincey's statements, "Opium, thou holdest the keys to Paradise," "To the hearts of the rich and poor alike, to wounds that will never heal, and to the pangs that tempt the spirit to rebel thou bringest an assuaging balm," are strongly tempted to try it. If that is not an invitation to persons of low character and resistance to try such statements are true or false, then I am much mistaken.

We know the story of the relationship of DeQuincey and Coleridge. They were both men of much charm and much ability. We know the chidings that took place between DeQuincey who, going to London, tried the tincture of opium as a cure for neuralgia, and Coleridge, who on a visit to London discovered a new remedy for all ills called Kendall's Black Drops. Coleridge tried this new medicine and relieved of pains, went about telling his friends that here was a miraculous remedy. But later he was to learn the infallible cure for pain was only the fallible opium.

Coleridge insisted to DeQuincey that he had only ordinary neuralgia while he, Coleridge, had the unusual type for which there was only one cure. Both used the arguments which you and I have heard so many times and which describe a pain which was unbearable, a disease which was unlike that afflicting any other person. The excuse for the use of opium often lies along this line.

It is interesting to note that DeQuincey wrote but one or two good things, and that Coleridge perhaps wrote only two. I am not sure whether "The Rhyme of the Ancient Mariner," is tinctured with opium or not; it sounds much like it. I am certain that the poem "Kubla Khan," in which Coleridge describes the pleasure dome, the soundless sea, and the caverns measureless to man sound to me unreal, fantastic, and like the products of an opium mind.

What of the effect of opium on the individual? Well, morphine, and gum opium, have the ability, as I said to make smooth the hardest and roughest of roads. It is the haven to which the spineless individual flees, the individual who stays down when he is knocked down. It is the drug in which the person of

no spiritual and mental calibre takes refuge, yet there are among such users some of the most brilliant and the most stalwart characters.

I do not know much about the inhabitants of Dover, but I venture to say that this is an unusual locality if there are not here those who have found it impossible to live, to stand the trials and difficulties of human existence, without the sustaining hand of opium. In the United States it is said that there are somewhere between one half million and ten million people using narcotic drugs. Nobody knows how many there are.

It has been said that wherever civilization has gone, two vices have always followed: alcohol and morphine addiction. We know that the Philippines became tinctured with opium long before the United States had anything to do with their government. We know that a certain righteous bishop and his committee brought the facts before the Governor of the Philippines, and later the President of the United States. As a result—Theodore Roosevelt, then President, pretty well purged the Philippines of opium.

What is the effect of the use of opium on the individual?

If you and I were to take opium or morphine over a period of a week or ten days, we would find when the pain in our face had left us that something remained besides the remembrance of the original ailment. Morphine has, as no other drug, the tendency to produce a desire to continue to use. Incidentally, the point that should be made here is this. It is dangerous to take medicines without the advice of a physician.

Self-dosage, the administration of drugs to oneself without knowing the contents thereof, should be avoided. Today, any of you, can go into a drug store and can buy sleep producing drugs that are capable of doing much damage, even of terminating life. It seems to me that those of us who are thinking people should continually urge and advise against lay people allowing well-meaning drug clerks to prescribe drugs for various so called common ailments. I am not asking for more work for the doctor, but I am trying to guard against the inherent dangers of self medication.

Fortunately, the Pure Food Act in this country has made it rather difficult to secure proprietary medicines which contain opium. But formerly, like the famous Kendall's Black Drops which Coleridge discovered, and which cured every ailment, many of our important drugs contained opium in some form, and the miraculous cures from toothache or other acute pain were a snare and a delusion.

At the Philadelphia Hospital we used to observe approximately 1500 of these persons a year, and they were usually, as might be expected in a city institution the lower economic and intellectual type, the type that seeks diversion, recreation, a thrill in the use of some unusual drug. I have never been able to adequately express the disgust which I feel when I observe a talented actor depict on the stage the degradation to which a drug taker may sink. Fortunately buses now do not do a thriving business as formerly in transporting the curious in New York and San Francisco to Chinatown to observe the degradation of opium smokers. The harm which is done by such a practice cannot be over-estimated. Furthermore, whenever the description of a famous criminal case occupies the front page of our newspapers fools rush in to try to repeat the crime.

Perhaps a person of a certain type of mind will say, "Well, that is one of the fool-killers which an Almighty and All Wise Providence has provided to purge society." I do not know the answer but it works that way anyway.

The character of the drug addict is a very interesting one. I one time walked through a drug ward in a bed of which was a rather famous Follies' character who had come to Philadelphia, and who had inadvertently failed to bring her supply of drug with her. She had developed a need for the drug, hence was brought to the hospital. I was commenting about the weather or some other harmless subject, when I felt a peculiar sensation in my pocket. She was trying to pick my pocket—her physician and benefactor—while I stood there talking to her. That type of person is more like a fox than a human being.

I have seen a mother who bewailed the fact that her son had been using drugs bring a

beautiful bouquet of chrysanthemums, or a fine bag of oranges to him, and when they were sufficiently searched plenty of narcotics were found therein.

At the county prison in Philadelphia we have a rather wide space which separates the visitor and the prisoner. The whole purpose of these wire walls is to prevent the passage of narcotics by the visitor to the prisoner. So one sees human personality under a curious guise, a guise in which a drug is God, and nothing must interfere with that God, so that families, or children, or jobs or religion have no influence whatever on the prevention of the use of the deadly opium. Use of narcotics without therapeutic indication is a cancer which eats into society. It destroys character, if the character is not deficient before the habit is started.

Finally, it has always been a question as to whether or not drugs destroy character, or whether destroyed character seeks drugs. I do not know which is the cause or which is the effect. I do know that for a vast number of these millions of people there is very little that can be done. I do know there is a group of professional men and women with good brains and good bodies who have inadvertently become users of opium, for whom much can be done. Until one can separate this group from the degenerate group, great confusion will exist as to treatment. I know this, however, that there is no drug in the pharmacopeia which will root out diseased moral and intellectual fiber and replace it with a healthy one, which will create a respect for law and which will make persons desire to work and to earn an honest dollar instead of a dishonest one. Also I do know that there exists a very close relationship between crime and the use of narcotics, that as the curve which depicts the earning power of the individual drops because of the use of drugs there is a rising curve of need, and that as these two lines cross, a brick through a jewelry store window or some other violence in the search of money is the answer.

It has been a very interesting experience for me to come here, but I have only touched the high spots in the discussion of a very long problem. I hope I have not too greatly fatigued you.

## THE NEGATIVE ASPECT OF ANALGESIA IN LABOR

CAZIVILLE L. HUDIBURG, M. D.

Wilmington, Delaware

It is with some trepidation that I present this paper, knowing that a young man should not be preaching, and realizing that the subject is perhaps only of academic importance and does not merit discussion, but most of all fearing the disapproval which such a subject is likely to arouse. However, since many physicians and practically all members of the public are quite enthusiastic about the use of analgesics in labor, I should like to call attention to some of the older and more conservative ideas on the subject. Almost every article written concerning the relief of labor pains proclaims the good and bad qualities of some specific method, or it summarizes the results obtained after trying several of the many methods. I do not intend to belittle or to elevate any particular method, but merely to consider a few points on the negative side of the question.

For a hundred years efforts have been made to relieve the pains of childbirth. Periods of time in which some drug has been actively used have come in waves, followed by a similar period of time when it was not used so enthusiastically, and then another wave of active use. This has continued to the present day. We are now in a period when vigorous attempts are made to produce a painless labor. The pendulum swings.

Physicians, as well as some of the most educated members of the public, have from time to time advocated for the mother complete relief of pain, from the time that labor begins until it ends. When ether and chloroform were first advocated other members of the same groups maintained that women were meant to suffer the pangs of labor and that any attempt to give relief was heretical. During these many years, authorities have differed, not only as to whether any attempt should be made to ease the pain, but also as to what drug or method should be employed. This difference of opinion has produced at least thirty different drugs or combinations of drugs, and methods of use. From the fact that there are so many methods it is self evi-

dent that there is no satisfactory or ideal one.

Physicians who use an analgesic or anesthetic of some sort do it for one or more of four reasons: (1) to aid in the mechanism of labor; (2) to relieve the patient of undue suffering; (3) to satisfy the patient, because she demands that something be given, not knowing for what she asks nor whether it should be given or not; (4) to make an impression on the patient and her relatives, so that it may be said, "she remembers no pain." Many physicians are forced to use something because of the euphonic advertising in lay magazines portraying the marvels of a painless childbirth. And it would be wonderful if it were only true. Describe any of the thirty methods, giving only the good points without any of the disadvantages, as the lay journals do, and it does indeed sound like a heavenly gift.

May I remind you that it was for one of the above reasons that Karl Brown first used opium during labor, in 1840, and ever since there have been spells of enthusiasm for morphine, alone or in combination with other drugs, and in spite of its dangers, there are still indications for it. After 1850, ether and chloroform were heralded as a god-send to the woman in labor, and they still have a place, but neither furnishes the ideal method, and both have their disadvantages. "Twilight sleep" was originated in 1902 by Von Steinbuchel and developed in 1905 by Carl Gauss at the Frauenklinik. It enjoyed popularity from 1910 to 1925, despite many eminent obstetricians who opposed its use. The controversy is still very much unsettled, some claiming that it is quite satisfactory despite its bad effects, while others claim that it has no place in obstetrics and anyone using it should have his license revoked.

Then Gwathmey in 1921, from the New York Lying In Hospital, gave us what was termed "Gwathmey's Synergistic Analgesia," and like morphine and scopolomine it is a quite satisfactory method and many use it almost routinely, but like all other methods it is not universally accepted. Since the barbiturates have recently become so popular, drug manufacturers in competition with each other have thrown many similar drugs on the market, and we have been urged to use them all.



In the literature we find listed the many advantages that the barbiturates have over other methods of analgesia, but other men are staunchly opposed to their use except in selected cases. All of the methods have their advantages and disadvantages. Some cases are suitable for spinal anesthesia or sacral block. Others may be given local infiltration with novocaine. Ethylene or nitrous oxide may be used during the second stage. Suitable cases may be given avertin, or rectal ether alone or in combination with a barbiturate.

The primary function of any method is to relieve the agonies of labor. Pain has always been pain, but modern civilization demands relief from it. The threshold of pain varies with the individual and with her mental conception of it. Fear and anxiety increase its intensity. The anticipation and thoughts of it make it worse, and the poor pregnant woman has nine months to anticipate and dread the onset. Labor, of course, is a painful proposition, but a woman will not mind it half so much, if during prenatal care she is taught not to dread it, if she has confidence in her physician, and if he gives her assurance. What she needs is vocal anesthesia.

Labor is a physiological process, not an abnormal condition. Labor pains are said to be less severe than the pathological pains of renal colic or gall bladder colic. After a long night of normal labor pains, the parturient mother next day feels fine, laughs, talks, wants to eat, and feels like getting up from her bed. Not so if she has suffered all night with renal or gall bladder colic. Next day she is exhausted—is sick. Cut the skin of a woman in labor with a pair of scissors and note the entirely different tone of her cry. Labor pains have been withstood since the beginning of time, and the pains themselves have produced no ill effects. There is pain when a tooth is extracted, and so the dentist gives gas, and if the process of labor were not fraught with complications, we could without hesitating, give something, but with the baby's life to consider, the length of the labor, cervical and perineal lacerations, maintenance of asepsis, puerperal morbidity of the mother and child, infant asphyxia, and postpartum hemorrhage we have to hesitate and wonder what will be best.

There is only a small group of physicians who do not occasionally use some drug during labor, and the chances are that you and I are going to use analgesia on some cases, if not on every case. There probably will never be a method that can be used routinely on every case, or that will be satisfactory to all physicians. Every man will have to choose the method that is best suited to the case on hand and the one with which he can get best results. In making this choice let us remember that giving birth to a child is a physiological process, and as long as this mechanism is normal let us do nothing which might make it abnormal.

One authority uses the following method: nembutal grains six and scopolomine grain 1/150 are given early in labor, and followed with nembutal grains three every three or four hours, as necessary. If there is much restlessness, another 1/200 grain of scopolomine is given. Or, to control the restlessness rectal ether in oil or nitrous oxide is used. In using this method the following points are stressed; toward the end of the second stage of labor it is usually necessary to do a low forceps delivery, and the method should not be used unless one is prepared to do a low forceps; do not use it unless the patient can be carefully watched; do not use it with morphine; do not give small doses and expect results; do not use it in a case of bad liver disease, although it has been used in eclampsia without bad effects; do not use it when there is definite disproportion or other evidence of dystocia; and, in nervous patients give larger doses as necessary.

The Council on Pharmacy and Chemistry of the American Medical Association asks that, when using the barbiturates, the following factors be remembered: danger of asphyxia to the child; restlessness of the mother; postpartum depression without co-operation; pulmonary congestion because the patient is unable to keep the bronchi clear of mucous; delirium may require morphine; intake of fluids is impaired; a special nurse is required; occasional toxic dermatitis; sudden death may occur; and it should not be given to debilitated patients.

Another authority asks us to remember the

increased excitement, the variable effects on the uterus, that contractions are stopped in a certain percentage of cases and that they are slowed in a higher percentage, the effect of the drug is variable lasting from one to three hours, the amnesia and analgesia is good in only about seventy per cent of the cases, apnea of the new-born occurs in ten per cent, when once given the action is uncontrollable, depression to the anesthetic degree is serious, and there is an individual variation in susceptibility to the drugs.

You and I are going to use analgesia. Civilization demands that we use it. Patients demand that we use it. Whenever possible, let us use vocal anesthesia, but when something else is necessary, let us consider the future of the mother and the future of the child.

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### THERAPEUTIC POINTERS

EDWARD PODOLSKY, M. D.  
Brooklyn, N. Y.

Back injuries should be transported down ward.

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In cases of fracture of the spine with complete paralysis, laminectomy may be indicated in the cervical region, is usually indicated in the dorsal region, and is always indicated in the lumbar region.

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Fractures of the spicondyles of the humerus need no reduction as a rule and the simple moulded splint or body swathe with the elbow in acute flexion is all that is necessary for fixation.

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Painful conditions associated with productive osteoarthritis can be relieved by the use of alcohol-neocaine nerve block.

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Bleeding in cystic hypertrophy of the endometrium is checked by the luteinizing hormone of the anterior lobe of the pituitary.

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Thyroid therapy frequently corrects scanty and irregular menses.

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Hunger contractions of the stomach are promptly relieved by administration of dextrose by mouth.

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Ten grains of sodium succinate in half cup

of hot water every three hours will often relieve pain due to cholecystitis.

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The fluid extract of condurango is almost a specific in uterine hemorrhage and may be used whenever hydrastis is advised.

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In cases where the patient is over forty years of age and suffering from irregular hemorrhage without a gross pathological lesion, the production of an artificial menopause by means of radium is the treatment of choice if drugs fail.

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In cases of urinary suppression following prostatectomy, glucose, 10%, given intravenously will often have the desired effect upon the excretory function of the kidney.

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Thyroid extract is an effective therapeutic agent in the management of true nephrosis.

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Belladonna will aggravate incontinence of the urine in the aged. Instead it is best to prescribe strychnine.

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Diathermy is often a successful means of eliminating endocervical gonorrhea.

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Direct irradiation of the kidney has been suggested as a means of treating idiopathic hematuria which has failed to yield to other measures.

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A vegetarian diet, restriction of water, and administration of phosphoric acid will aid in overcoming quite a few cases of nocturnal incontinence.

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The modern treatment of chronic pyelonephritis consists of systematic eradication of all possible foci of infection, of the elimination of stasis in the upper and lower urinary tract, of routine drainage and lavage (alternating silver nitrate with penetrating dyes), and of the employment of local immunization by the injection of the filtrate directly into the renal pelvis.

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Attempts to cause stones to pass from the solitary kidney pelvis or ureter in cystoscopic

(Continued on Page 140)

# EDITORIAL

## DELAWARE STATE MEDICAL JOURNAL

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W. EDWIN BIRD, M. D. . . . . EDITOR  
Du Pont Building, Wilmington, Del.  
WILLIAM H. SPEER, M. D. . . . . Associate Editor  
917 Washington St., Wilmington, Del.  
M. A. TARUMIANZ, M. D. . . . . Associate Editor & Bus. Mgr.  
Du Pont Building, Wilmington, Del.  
Telephone, Wilmington, 4368

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### AIR CONDITIONING IN SUMMER

The historic old Baltimore & Ohio Railroad, America's oldest trunk line railway, has been the pioneer in many advances that have made history. Most recent of these is the relatively new science of the air conditioning of public places by which such places are furnished a constant supply of fresh air, duly filtered, properly humidified (or dehumidified) and seasonably chilled (or heated). Beginning with their crack trains, the *Columbian* and the *Capitol* and the *National*, the B. & O. has succeeded so phenomenally that today no through train of decent pedigree, on any railroad, would operate without this equipment, showing once again that imitation is the sincerest form of flattery.

We rode those pioneer trains with pleasure, and we recall the fidelity of those original

engineers to their own postulates, especially the last one: "seasonably chilled." No colds, no pneumonias, no deaths came from those early trains, because the temperature differential was never allowed to exceed 15° Fahrenheit. But the zeal of the imitator knew no such physiological bounds, so today we face, in trains and stores, in banks, hotels and theatres, a situation frequently fraught with danger. Many of the proprietors of these public places (and of these the theatres are the worst offenders) seem convinced that the lower the inside temperature the greater the appeal. What they should be taught is that the lower the inside temperature the greater the risk.

We had one experience not soon to be forgotten. Leaving the city street with a temperature of 97°, and minus all semblance of topcoat, we entered one of those two million dollar palaces devoted to the Hollywood luminaries, and in less than three minutes we were seated in a huge vault with a temperature of 54°. Now, by a mere coincidence, 54° is the exact temperature the year round in the depths of Luray Caverns, yet when one enters here in the summer time he is considerably provided—at a price, of course—with a mackintosh or lightweight overcoat. Furthermore, here one is exercising by walking, yet in that glamorous temple of Thespis we were glued to one spot for over two hours, with the inside and outside temperatures showing a differential of 43°! And the cold we caught because of that manager's ignorance goes down in our memories as the very worst we ever had. Incidentally, we've never been back.

Research is still going on to determine the optimum differential, some authorities believing it should not exceed 5°, while others incline to the view that anything up to 20° is compatible with health. From our own observations, we believe that a differential of 10°-12° is about right for the average summer day, with 15° allowed on the torrid days. Certain it is, the managers of those public places who do not heed the mounting com-



plaints of their paying patrons are going to regret it some day, either because of lost patronage or Board of Health regulations. How much better it would be if they would voluntarily return to reason and themselves set their house in order—at, say 12°.

### MISCELLANEOUS

#### Visiting Nurse Association

ANNA VAN W. CASTLE, R. N., *Director*  
Wilmington, Del.

#### SERVICE EXPLAINED

The Visiting Nurse Association is prepared to give nursing care and treatments to any patients in their homes who are under the care of a physician. Only two visits may be made to a patient if a doctor is not in attendance, one to ascertain the patient's condition and advise physician, and the other to find out if the physician has been called. All types of cases are cared for by graduate registered nurses.

#### ORDERS FOR NURSES

The Association has no standing orders, other than to take temperature, pulse and respiration, put patient to bed, and advise a physician. No care or treatment may be given without getting in touch with the physician for his order. No verbal orders may be received through the patient or member of the family. Orders must either be written by the physician and left in the home for the nurse, or telephoned by the physician to the Association office or to the nurse.

#### PRENATAL CARE

Nurses may make an introductory visit on a prenatal case, and if the patient is registered with a private physician the nurse must call the physician and obtain orders for either full prenatal care, or instructive care, before making a second visit. Full prenatal care includes the taking of the systolic blood pressure and urinalysis for specific gravity and albumin. Any abnormal symptoms to be reported to the physician. If the patient has not seen her physician, the nurse urges that she see her physician at once.

#### SPECIAL HEALTH TREATMENT

The nurse *may not* give serum or vaccine treatments. The nurse *may not* give anti-toxin. Cultures *may not* be taken. For all

hypodermic treatments a written order and specific dosage to be clipped to chart.

#### NURSES' HOURS

The nurses are on duty from 8.00 a. m. to 5.00 p. m. Call (Wilmington 6511) to be made in the forenoon should reach the office by 8.30 a. m. Calls to be made in the afternoon should be received by 1.30 p. m. Two nurses are on duty on Sundays and holidays, and may be reached through the courtesy of the Physicians Exchange (Wilmington 6234).

#### FEES

For those patients who can afford to pay a charge is made of \$1.00 per visit; \$1.25 is charged for maternity visits. For a special appointment or hourly service \$1.50 is charged for the first hour, additional time up to four hours is pro-rated. (The fees are based on the actual cost per visit to the organization.)

Part-pay service is rendered to those patients unable to meet the full cost of the visit.

Free service is rendered to those on Relief or to those who, on investigation are found unable to pay. (Free work amounted to 42% of the Association service in 1934.)

Patients who are industrial policy holders of the Metropolitan Life Insurance Company, the Equitable Life Insurance Company, and John Hancock Insurance Company, may receive care at the expense of their company, with whom the Association has contracts to cover this nursing work. These visits are subject to the rules and regulations of the individual company, i. e., a chronic case may receive but six visits, a normal maternity eight visits, acute illness may have more visits but is subject to curtailing rules and regulations.

The Association assumes the responsibility, if so ordered by the physician, to continue visiting any case needing care after the insurance grant has been used up. In some instances the patient will pay for these visits, but more often this is free work.

#### TERRITORY COVERED

District I—City of Wilmington.

District II—Rural to Holly Oak; to New Castle, to Black Cat; to Hockessin and Yorklyn.

District III—Rural to Richardson Park.

Elsmere, Newport, Marshallton, Stanton. All this work carried since 1933 for insurance and pay cases, free work only as is covered by local contributions.

#### WELL BABY CONFERENCES

These conferences are held weekly at Boys' Club Building, 2-4 Tuesdays; and Neighborhood House, 2-4 Wednesdays. A physician is in attendance every second week. Their objects are to teach the mother the value of medical supervision, and how to keep her children well; the importance of a weekly gain in weight and of a yearly physical examination and the importance of proper feeding and diet, which is regulated by private physician or the conference physician.

The policies in conducting these conferences are:

1. Well babies, from three weeks of age and children up to six years, are admitted to conferences. Well babies under the care of a private physician are admitted for weighing and measuring only. If there is any illness other than a condition which has arisen from improper feeding, the baby is excluded. It is, however, the duty of the nurse in charge to see that the mother with a sick baby gets medical advice, and the mother is instructed to call the family physician. Such cases always have a home follow-up visit to see that medical attention has been obtained.

2. A diagnosis of disease in babies, other than malnutrition, is not made by the conference physician.

3. No prescriptions are given.

4. A physical examination is given on admission. Defects or corrections are referred to the family physician.

5. No child is examined unless accompanied by the mother or some relative who is responsible for the child, and to whom recommendations can be made.

6. Toxoid treatment is given by the conference physician to the children of families who are financially unable to visit a private physician. This is sanctioned by the Medical Society and State Department of Health.

#### MATERNITY CLASS

The Association maintains a class for pregnant mothers at Neighborhood House, Friday, at 2.00 p. m. This class is taught by one of

the staff nurses, who gives the mothers, in eight lessons, instructions in securing medical supervision early in pregnancy, and through well-planned demonstrations the proper diet, preparation for a home delivery, and care for herself and baby.

#### ETHICS OBSERVED

It is the desire of the Association to be only of assistance to the physicians. The staff nurses understand that absolutely no suggestions be given as to preference for any physician, and clinics are to be used only when other medical care cannot be secured.

The physicians are asked to make any suggestions at any time to the Director or to the Medical Advisory Committee. Any dissatisfaction with the service should be reported to the Director, so that any misunderstanding or error may be immediately corrected, to keep up the standards of both the nurse and the organization. The Association is endeavoring to produce a nursing service that meets the need of the whole community, and that is a real help to the medical profession.

#### Let's Have a Foundation

We propose a Foundation with a capital of many millions of dollars. We believe that there should be no slightest difficulty in raising this money. The majority report of the Committee on the Cost of Medical Care indicates that we have sufficient incomes readily to contribute the paltry sum.

We demand a study of two grave problems confronting the insufficient income class. These are respectively, exposure and under-nutrition. Either of the above has caused far more illness and death than lack of proper medical care.

There can be no question that the best clothing and the highest quality of food cost too much. A survey should be made; a committee of Doctors of Philosophy must be named at once. A Federal grant of a vast sum of money may be readily secured for this investigation. When this sum is exhausted the Doctors of Philosophy will report that good food and good clothes are expensive.

Our Foundation will then insist that certain security legislation be introduced in Congress and in the legislatures of the various

States. Compulsory clothing and food insurance laws will be enacted.

The Rosenwalds and the Filenes will be compelled to discontinue the manufacture or sale of good clothing. Mr. Milbank will have to supply a cheaper and poorer grade of milk. Since we have some who cannot afford good clothing and good food there is only one recourse,—i. e., compel everyone of that particular income-class to purchase, through insurance, the cheaper grade provided.

To insure the proper administration of this benevolent legislation we must have a large group of salaried directors. For lack of a better name we shall call them the Well-fed Workers. The latter are carefully chosen elderly maiden ladies of both sexes who, in the interest of fairness, must have not the slightest knowledge of either the food or clothing business.

Statistics of foreign countries, where the system has been in vogue since it has been in vogue, go to show that Mr. Filene may earn up to \$2000.00 per annum, if he has enough clothing-buyers on his panel. Mr. Milbank may possibly earn the same, if enough Eagle Brand is elected by the insured on his list.

Having thus taken care of the insufficient-income class the Well-fed Workers will next establish in all cities and towns certain little depots for supplying these necessities to the real indigents. We shall call these depots "free clinics." They shall be under the direction of other salaried Well-fed Workers. The work and material will be donated by the food and clothing people.

Mail checks forthwith to the Physicians' Funny Foundation, Ink., just ink, that's all.

—Oregon Medical Reporter.

---

### Corpus Luteum Therapy

George W. Corner, Rochester, N. Y. (*Journal A. M. A.*, May 25, 1935), is aware that his discussion of corpus luteum therapy cannot immediately result in curative benefit to a single patient, nevertheless he believes that it will be profitable to consider the subject as it stands today, from the mutual standpoint of the practitioner and the investigator. Such

consideration will not only explain the physiologic basis on which practical applications are to be worked out but also help, he hopes, to clear away the misconceptions and false hopes by reason of which in the past so many bottles and pill boxes have been filled with elegant but inert pharmaceuticals. Therefore he discusses the function of the corpus luteum, progesterin (the hormone of the corpus luteum favoring gestation), relaxin (another substance found in extracts of the corpus luteum, which has the property of relaxing the symphysis pubis in the guinea-pig in a manner similar to the normal relaxation which occurs in that species during pregnancy), the availability of progesterin, the clinical possibilities of corpus luteum therapy and its empirical preparations. He concludes that the American practitioner now has at his disposal no corpus luteum therapy that has passed the test of experiment, but current work with progesterin promises to give in the future a corpus luteum hormone with which the possibilities of therapy may be explored.

---

### THERAPEUTIC POINTERS

(Continued from Page 136)

maneuvers are dangerous because the stone in passing is likely to obstruct the ureter.

—

Bismuth should be given with caution in all patients with faulty elimination.

—

When syphilis and tuberculosis are present at the same time the administration of salvarsan and its analogues may be followed by disaster. The possibility of a tuberculosis exacerbation should always be thought of.

—

Some pediatricians follow the rule of giving anti-luetic treatment in all children who have indefinite symptoms and who do not respond to ordinary treatment.

—

A patient sensitive to one arsenical is more than likely to be sensitive to other arsenicals.

—

No less than 20 injections of an arsephenamine and more if possible preferably in one



or two courses, and an equivalent amount of heavy metal without any interval should be given in all early cases of lues to control infectiousness.

—

Bismuth should not be substituted for arsenic in primary or secondary syphilis, except in patients resistant to arsenical treatment.

—

In the treatment of patients with secondary syphilis the anti-luetic remedy should be given as intensively as possible.

—

Too little arsephenmine is worse than none at all, since it deprives the patient of the source of his resistance and offers no adequate substitute.

—

Herpes zoster is a self-limited disease, but its course is shortened and the severe pain accompanying it is usually rapidly relieved by pituitrin injections.

—

In urticaria, angioneurotic edema, and serum sickness, adrenalin given hypodermically in doses of 0.5 to 1.0 cc of a 1:1000 solution produces relief.

—

Xerodermic patients are very liable to get eczema. A good preventative is to keep the skin as smooth and supple as possible by the free use of glycerine in the form of glycerite of starch.

—

Interrigo yields quite nicely to iodine therapy. A wad of cotton, held by a hemostatic forceps, is soaked in an alcoholic solution of iodine (1:100) and the affected area is rubbed vigorously with it. The scales should have previously been removed. The burning sensation lasts only a minute. After this application an ointment is applied. Very often the troublesome itching is abolished after the first application of iodine.

—

Sodium thiosulphate given intravenously in ascending doses beginning with one gram and increasing to one and a half grams daily will often cure a case of arsenical exfoliative dermatitis.

## BOOK REVIEWS

Doctors and Juries. By Humphreys Springstun, LL. B., Detroit. Pp. 155. Fabrikoid. Price, \$2.00. Philadelphia: P. Blakiston's Sons & Company, 1935.

This is an elementary, non-technical thesis on that ground which medicine and law share in common. It covers briefly a wide range of subjects, but most stress is placed on malpractice suits and the various angles of insanity, all of which is interesting and informative. The viewpoint is sensible and conservative. The style in spots is a bit verbose, and the subject matter might, with profit, be handed out in smaller mouthfuls—one paragraph is actually four pages long. Nevertheless, these minor ailments do not detract from the value of the book nor affect the good advice it contains: it really is one of the better short monographs on this subject.

Names of Surgical Operations. Edited by Carl E. Black, M. D., for the Western Surgical Association. Pp. 102. Cloth. Price, \$3.00. St. Paul: Bruce Publishing Company, 1935.

The purpose of this little manual is to simplify a subject that certainly needs it. For instance, some 22% of the terms in a famous dictionary are not formed on correct philologic rules, yet this situation seems beyond relief, since the people make the language and the lexicographer merely records it. The committee makes no attempt to correct this situation, nor does it divide operations into major or minor—two wise decisions. It did succeed, however, in compressing 3313 names into 743, a huge task and one that earns for it our praise and admiration. In the appendices, it lists 188 fundamental surgical procedures; numerous philologic corrections; and several suffixes. We have found, so far, a remarkably small number of typographical errors.

Should we say that this work will find a general and prompt acceptance we would surely be optimistic, such is the inertia of the medical profession; yet this monumental endeavor will unquestionably pioneer the efforts of the future to simplify and standardize the nomenclature of the operating room. To facilitate this most desirable end the book should be on the desk of every surgeon and in every hospital.

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Laryngoscope, 1935, XLV, 149-154★

### SEE ALSO

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Proc. Soc. Exp. Biol. and Med., 1934, 32, 241-245★



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INCORPORATED 1789

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JULY, 1935

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● For over twenty years, intensive studies have been made of the stabilities of the vitamins under various conditions and treatments. Data accumulated indicate that certain vitamins contained in foods may, under specific conditions, be sensitive to oxygen in the presence of heat, or to heat or oxygen alone (1).

Broad details concerning vitamin stabilities are now general knowledge. The basic principle of commercial canning, namely heat sterilization of foods in sealed containers, is also generally known. As a consequence, there has been a tendency in some quarters to regard canned foods as deficient in certain, if not all, vitamins originally present in the raw material because of the conditions to which they were subjected during the canning procedures. Such a concept is not consistent with the established facts.

In future issues it is our intention to review the vitamin values of specific canned foods, as well as other nutritional virtues which they may possess. At this time we should like briefly to survey the matter of the stability of the most widely distributed vitamins during the canning procedure:

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A fuller discussion of vitamin stabilities during canning procedures is not possible here. For further reading a recent publication dealing more in detail with this important subject is recommended (2).

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(1) The Vitamins, Sherman and Smith, The Chemical Catalog Co., New York, 1931.  
The Vitamins; Browning, Bailliere, Tindall and Cox, London, 1931.  
Vitamins, A Survey of Present Knowledge, Medical Research Council. H. M. Stationery Office, London, 1932.

(2) Ind. Eng. Chem. 24, 650 (1932)

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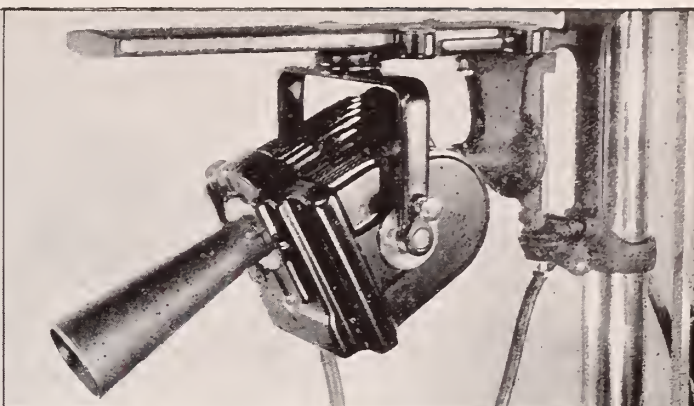
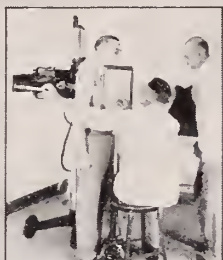
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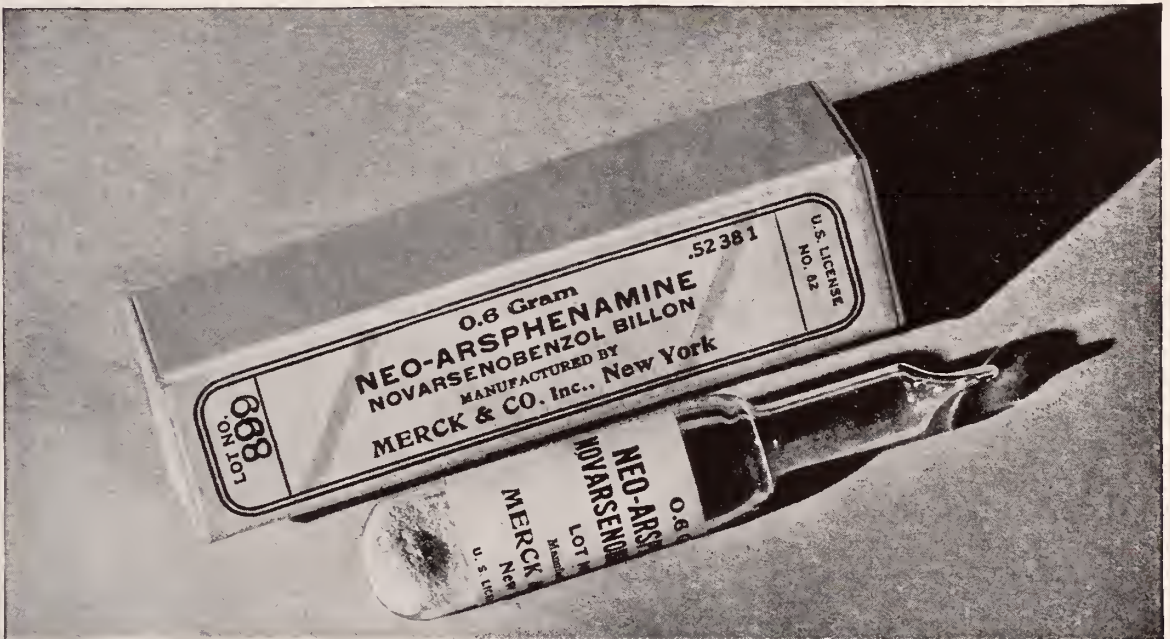
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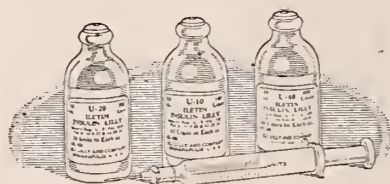
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## RECENT INVESTIGATIONS ON THE PHYSIOLOGY OF GASTRIC SECRETION AND THE RELATION TO CLINICAL MEDICINE\*

LAY MARTIN, M. D.  
Baltimore, Md.

Mr. President and Members of the Society: I wish to present to you today some of the more recent investigations on the physiochemical structure of the gastric juice, and the relation of these studies to clinical medicine.

I would like to start off by painting a background to give some color to the scene upon which we are working. As you well know, the first rough study of gastric juice was done many years ago by Beaumont. He found, through the aid of Alexis St. Martin who had a wound in his stomach wall, that gastric juice was acid, that secretion was produced by different types of stimuli, and that it could be made to appear by psychic stimuli; that is, if he simply offered to Alexis a drink of whiskey, gastric juice would appear in the stomach.

Pavlov and his co-workers, in Russia, extended these studies and made fundamental observations of note. They showed that the vagus nerve was the direct controller of secretion; that by stimulation of the vagus they could produce gastric secretion. Following section of the vagus, they were able to show that different effects could be produced on gastric secretion by stimulating the peripheral and central nerve roots of the Vagi.

He was able to show, in animals with gastrotomies and in which the cephalad segment of the sectioned esophagus was fixed to the outside through the neck, that there was such a phenomenon as psychic secretion. When food was offered to such an animal which had a gastrotomy opening in its stom-

ach, it would enter through the mouth and come out of the esophagus, yet during all of this time gastric juice was constantly secreted in the stomach. Therefore, beyond a modicum of doubt, it must be that gastric juice is, in part, controlled by a nervous center.

A great deal of experimentation followed Pavlov's work, particularly in Germany, where more investigations were made on the bio-chemistry of gastric secretion. A good deal of this work was devoted to studies on pepsin, but they were unable to obtain it in pure form.

This work has been carried on in this country by a number of men, of whom no doubt Carlson stands out prominently in your minds both in the physiology and chemistry of gastric secretion. Gamble and McIver did the first detailed meticulous work on the chlorides and the bases of gastric secretion. Michaelis, has worked out the titration curves of gastric secretion, and Northrop has crystallized pepsin, obtained from the gastric mucosa of a cow.

The observations that I wish to bring before you are in supplement of these that I have cursorily outlined, and, with this data in mind, I shall then try to sketch for you some picture of what goes on during gastric secretion.

These data were obtained from individuals who came to the Johns Hopkins Hospital for one reason or another. There were about 150 persons investigated, and the scope of the investigation entailed the determination of such substances as chlorides, hydrochloric acid, phosphates, carbon dioxide, proteins, various non-protein nitrogen constituents. I shall try to present them to you in an orderly manner.

When a tube is placed into the stomach of a fasting individual, the so-called resting juice is found. This juice may or may not con-

\*Read before the Medical Society of Delaware, Dover, October 9, 1934.

tain hydrochloric acid and, for the time being, let us put off its description.

Following the injection of histamine, a copious secretion of gastric juice appears in almost all normal individuals, and that gastric juice contains varying amounts of hydrochloric acid.

It is important to determine what happens to other materials, besides hydrochloric acid, in the gastric juice during secretion.

The first figure is produced to show the relation of the so-called fixed bases, such as sodium, magnesium, calcium and potassium (actually present as neutral salts, such as sodium chloride), to hydrochloric acid. As you know, when gastric juice is secreted, the fluid which appears is, when filtered, quite limpid. You will notice on the graduated scale that when there is a great deal of hydrochloric acid, about 120 cc. as you would titrate it, or 120 milli-equivalents, the bases are very low about 30. When the titratable acidity becomes less, the base is increased.

I shall not try to burden you with intricate relationships, but I should like to give some outline, this may be seen in Figure II. In the fasting juice we find, at times, hydrochloric acid, but there are many other ingredients. For the sake of simplicity only a few are shown in the figure. These other fractions, I shall describe later.

In most normal persons, thirty minutes after stimulation, the type of juice is greatly changed. With the increased volume of secretion, hydrochloric acid is present in considerable amounts, and the neutral salt concentration is correspondingly decreased. During this same period, chlorides are increased. This phase of stimulation continues for varying periods of time and, as it wears off, there is a gradual return of the electrolyte pattern to that found in the normal resting juice. This is done without the influence of regurgitated duodenal contents. It is not necessary. The titratable acidity can be influenced by duodenal regurgitation, but this phenomenon is not a prerequisite to normal secretion. If you look at Figure II, you may have a better idea of why this is so. The top row represents the volume of juice secreted, and it is evident that, throughout the period of secretion, the

amount of base remains about the same. Only the concentration is decreased. Therefore, it seems probable that the increased titratable acidity, found during the height of secretion, and the gradual decrease are due in the first place to dilution of salts in HCl and in the second to the dilution of acid by salts. The concentration of acid, as secreted, apparently remains about the same.

The individual who does not secrete hydrochloric acid nevertheless responds in a way to histamine. He usually secretes greater quantities during half-hour post stimulation periods than are found during previous control half-hour periods. He secretes a juice which contains neutral salts, carbonates, phosphates, proteins, and non-protein nitrogen constituents. The secretion level of the salts changes; in other words, salt is not always secreted into an achlorhydric stomach at the same concentration.

There are known to be nitrogenous materials in the gastric juice, and it is possible to precipitate the proteins of the gastric juices much in the same way that we can precipitate the serum proteins. On this water-clear filtrate, obtained at a more acid reaction than that of blood, such substances as ammonia, uric acid, urea, amino acids, the total amount of non-protein nitrogen have been found and quantitated.

The finding of ammonia in the gastric juice brings up a fascinating question: What is the role of ammonia in the gastric juice? The only other place you will find it as a secretory phenomenon is in the urine. Amino acids and uric acid are found in about the same amounts as they are present in the bloodstream, and the non-protein nitrogen is in itself almost the same quantity as that found in the bloodstream.

When we turn from the normal cases to the achlorhydrias, we find a different state of affairs. The non-protein nitrogen in the benign achlorhydric, i. e. the functional achlorhydria of the neurotic, the thyro-toxic goiter, or the gall bladder disease patients, and so on, is about double that of the normal gastric juice.

It is of importance to note that in carcinoma of the stomach associated with achlorhydria these non-protein nitrogen constituents

are increased about four-fold. This is a real diagnostic help in those cases where it is difficult to distinguish a peptic ulcer from a carcinoma of the stomach.

The question, why is ammonia present in gastric juice, may be, to some degree, answered as follows: It is present in the blood at about 0.1 to 0.2 milligrams per cent. In the gastric juice, it is found at about 5 milligrams per cent; in other words, there is about fifty times as much in gastric juice as is in blood. The urea in the bloodstream accounts for almost all of the non-protein nitrogen. The urea found in the gastric juice is very low, around 2 to 4 milligrams per cent. This curious association of a relatively large amount of toxic ammonia and small amount of easily diffusible urea suggested the thought that it might be a wise idea to look for urease in the gastric juice. By setting up different experiments at different range of hydrogen ion concentration it was possible to show that when gastric juice was allowed to digest itself there was an increase of ammonia which could be shown to be directly due to the destruction of the urea of the gastric juice; furthermore, when urea was added, it was possible to demonstrate a quantitative relationship between the breakdown of urea and increase of ammonia.

The precipitation of proteins was mentioned above. We have found that there are at least two protein-like substances in the gastric juice beside the ordinary mucus. One of these proteins has been isolated, crystallized, and called gastro-globulin. The crystals of gastro-globulin are of various shapes, depending upon the method of crystallization.

This protein contains pepsin and urease, so it is presumably the same type of protein that Northrup has isolated from the bovine gastric mucosa.

In addition to this protein, there is another protein-like substance present in the gastric juice, which does not contain pepsin or urease. This, we have been unable to get out in pure form. We know that it is attached to a carbohydrate radicle and that its iso-electric point is about PH 3.5. From the carbohydrates of this protein, two types of osazone have been obtained.

Therefore, now that we have laid out the stepping stones, as it were, let us see what we can build up in the way of a pattern of gastric secretion.

I have charted, in Figure IV, a composite diagram of a normal case of gastric secretion. It shows, in the top row, the electrolytes or the elements found in gastric juice during various phases of secretion. In the second line, it shows those same elements in the bloodstream and in the bottom, in the urine during the same phases of a gastric secretion. Gastric juice, blood and urine were obtained as controls, and then at thirty, sixty, and ninety minutes after injection of histamine. All specimens analyzed by identical procedures.

Let us at first see what happens to the cations, the positively charged ions. After stimulation there is a decrease in the neutral salts or a decrease in base. There is an increase in hydrogen (hydrochloric acid) and a slight decrease in ammonia, which later returns to the initial level.

In the columns representing the anions, i. e. the negatively charged particles, we see that the chlorides increase. It is generally stated, by numerous writers, that chlorides do not increase during gastric secretion. As far as this data is concerned, that is an error; they increase, and they increase considerably. There are very small changes in the phosphates. What carbon dioxide was present in the fasting juice, disappears as soon as hydrochloric acid appears, and the proteins of the gastric juice stay about the same.

Let us consider the complete electrolytic change in a person pouring out gastric juice, the elements of which he is taking from his bloodstream. It would seem logical to believe that there should be changes in the electrolytic balance of the serum. This supposition is born out as follows. There is a slight increase in base because less base is lost to the gastric juice. There is a drop in the amount of blood chlorides. There is a drop in the phosphates. It seems small on the chart but when one pictures the ratio of serum chloride to phosphate, the fall in the latter is seen to be proportional to the former. As chlorides are lost, the excess, or freed, base immediately combines with



CO<sub>2</sub> and one finds an increase in CO<sub>2</sub> capacity. The proteins vary but little, however, they vary inversely to the serum chlorides.

We may now inquire into any urinary variation, all the while remembering that the experimental subject has lost from his serum chloride and phosphorus and has added to his serum base and bicarbonates. In other words, he is in a condition of relative alkalosis, very much the same as a person who has vomited a great deal, similar to the person who has taken large doses of sodium bicarbonate. Therefore, his urine must get rid of an excess amount of base, and must put out relatively less chlorides and less phosphates than it did before. That would seem a reasonable theory and that is exactly what happens.

Among the achlorhydrias, the changes of the electrolyte pattern show definitely smaller changes and the urine is more apt to become acid as the body has not lost chlorides in excess of base in the gastric juice. It was thought that it would be possible to diagnose an achlorhydria if the urine became acid during digestion. That, unfortunately, does not hold true. For, in a certain number of normal cases, the urine became more acid.

We have now before us a broad schema which outlines the changes occurring in the body during gastric secretion, but now, how does it help us in medicine?

Dr. Tomlinson has outlined for you very well and very clearly the ideas or the reasons for doing a gastric analysis. I am biased, I admit it to start out with, but I believe that gastric analysis is done routinely much too often.

There are two things you want to know about gastric hydrochloric acid: First, is it present? Second, is it absent? Suppose you do find a high titratable acid in your gastric juice, what does it mean? It does not diagnose anything. You may have a high titratable acidity in perfectly normal cases. However, there are times when the differential diagnosis between gastric ulcer and carcinoma is questionable. In these instances a high acidity points more toward an ulcer than it does carcinoma, although early carcinomas

can have a high acidity. In these cases of carcinoma, the titratable acidity usually gets smaller and smaller as time goes on.

Hyperacidity per se is a bad word, as I have said before. Hydrochloric acid is secreted at about the same concentration, at about 0.5 per cent. It varies a little bit, but relatively little, so little that it is of no clinical importance and a much better expression is a hyper-secretion of acid. It may represent an organic pathologic state, or it may not. It may be indicative of obstruction. However, you can show obstruction very easily with your x-ray. In relation to gastric secretion in carcinoma, there are two things which are worth while knowing: 1, You would like to know that acid is either absent or decreasing in that patient. 2, You would like to know the non-protein nitrogen contents of the juice. The juice must be obtained free from blood, or relatively free from it, or else the value of the non-protein nitrogen determinations are vitiated. If one finds in this juice a large amount of ammonia or amino acid, diagnosis leans much more toward carcinoma than it is toward gastric ulcer. We have six cases on record which on this basis we have been able to diagnose as carcinoma rather than gastric ulcer prior to operation.

You may say, "What of it? You are going to operate anyway." True, but this is a defeatist attitude and robs medicine of one of its greatest interests, i. e. the ability to tell the surgeon what he will find. Anyone can go in and tell what is found. If he cannot, the pathologist can.

There is one more point that I would like to develop on the titration of gastric juice. As Dr. Tomlinson has mentioned, the results of titration of gastric juices are usually expressed as free hydrochloric acid and total acidity or combined acidity. We know what we mean by free hydrochloric acid and its titratable end-point is the canary yellow of Topffer's solution. (Some use the end-point that Michaelis has adopted, which is a salmon-pink. That is of no direct bearing at the present moment.) Beyond this point, this yellow color, which is around PH 3.5 to PH 4.0, we

add phenolphthalein, and titrate up to a pink color. The amount of alkali that is added between these colors is taken as representing the combined acidity of the gastric juice, and as far as I can understand from reading the literature, combined acidity is supposed to represent the amount of acid which is combined with protein.

Now, for a moment, let us pause. Proteins are amphoteric; they can combine with either acids or bases, and to know with which they are combined, one has to know their so-called isoelectric point, that is that point in the acid-base range at which they do not combine with either. On the acid side of this point, their positively charged radicles are available for chemical union; on the alkaline side the negatively charged. It has been mentioned that the isoelectric point of gastric juice proteins is about PH 3.5. It is to this point that the usual titrations for free HCl are carried. Therefore while titrating to this end point of canary yellow, not only has the free HCl been determined, but, also, the amount of acid, all the acid which is combined with all the proteins of the gastric juice. In other words, the free hydrochloric acid figures give not only the amount of free hydrochloric acid but also the total combined acidity. The alkali that is added after that point combines as base with the protein and does not in any way measure combined acidity. It really estimates the alkaline combining strength of the gastric juice. In cases of achlorhydria, it has been called HCl deficit; another misnomer. Therefore, it is misleading to use such an expression as "combined acidity" while using the present method of titration, and what we had much better do in using the usual figures is to say that we find that the combined and free hydrochloric acid is, say, 48, which corresponds to the old figure that was simply given for free hydrochloric acid. This would eliminate the so-called "combined acidity" until we do know what it means. Up to now we have no idea. It may have some connection with various conditions, particularly those found in achlorhydria, but until that time comes it would seem more reasonable to use the one determination.

## SOME RECOGNIZED ESSENTIAL DIAGNOSTIC PROCEDURES IN GASTRO-INTESTINAL DISEASE\*

ROBERT W. TOMLINSON, M. D.  
Wilmington, Del.

The time allotted for this presentation necessitates brevity, eliminating the possibility of any great minutia of detail. Naught that is new, nothing that is bizarre, and only the minimum of imperatively necessary investigative procedure will be mentioned.

### HISTORY

A good history, coupled with a rigid cross-examination of a patient is imperative, disclosing other mal-conditions leading to or accompanying the dyspeptic symptoms. In certain decades of life, the incidence of various conditions has a preponderance, and to such, cognizance must be given in evolving diagnoses, thus duodenal ulcer is more common in men between twenty and forty; carcinoma is manifested usually after middle age and like cirrhosis of the liver, affects males more commonly than females; cholecystitis occurs with greatest frequency in middle-aged women. Colonic diverticulitis generally develops after the age of forty; young people are prone to neurotic states, psychic irregularities and dietetic errors.

Effects of occupation merit consideration; nerve strain predisposes to functional disorders; exposure to lead may cause intestinal colic and constipation. Sedentary avocations are productive of intestinal stasis.

Carcinoma may successively be exhibited in various members of a family or in succeeding generations; while syphilis may be a potent productive factor. (1)

### STATUS PRAESENS

The subjective symptoms of the patient must be carefully and intimately elicited. Inquiry relative to the existence of abdominal pain, anorexia, bulimia, belching, flatulence, regurgitation, heartburn, nausea, vomiting, dysphagia, jaundice, diarrhea, constipation, other complaints and weight must be made.

### PHYSICAL EXAMINATION

I. Familial hypersthenic gastric diathesis is a predisposing cause of duodenal ulcer.

\*Read before the Medical Society of Delaware, Dover, October 9, 1934.

II. A wide epigastric angle and broad features are seen in those subject to Addisonian anemia.

III. Hepatic cirrhosis is noted in those of sparse hairiness on chest and abdomen, and with female distribution of pubic hair.

IV. Gall stones tend to develop in people with deep chests, wide subcostal angles, and wide, rounded faces with narrow eyes.

V. Inspection of general appearance of patient accords much information to observant examiner evinced by status of nourishment, condition of hair, pupillary state, color of skin and conjunctivae condition of teeth, mouth, tongue and gums; the blue line of lead poisoning or the pigmentation of Addison's disease, the presence of left supraclavicular lymph gland enlargement in malignant disease of the gastro-intestinal tract, and epitrochlear gland in syphilis. (1)

#### BLOOD STUDIES

The blood chemistry should be investigated for:

*Blood urea nitrogen*, which may be increased in: (Kolmer) Poisoning from heavy metals, passive congestion, prolonged and severe vomiting, gastric and duodenal fistulae, severe diarrhea. Decreased in: (Trumper and Cantarow) acute yellow atrophy of the liver; acute toxic hepatic necrosis due, to: phosphorous, arsephenamine, chloroform, carbon tetrachloride, eclampsia, acute hepatic insufficiency, following operative procedures upon the biliary tract.

*Blood chlorides*—Normally 400 to 500 mgm. per 100 c. c. of blood as sodium chloride, or 570 to 620 mgm. per 100 c. c. of plasma. (Kolmer). Over 600 or under 300 likely to be pathological. Reduced in prolonged vomiting and diarrhea.

*Blood cholesterol*—Increased in: cholelithiasis and obstructive jaundice. (Kolmer, and Trumper and Cantarow). Decreased in: chronic bacterial infections, syphilis, starvation states, pernicious anemia (Kolmer), acute hepatic disease as: acute yellow atrophy of liver, arsephenamine, carbon tetrachloride and phosphorus poisoning, cholangitis, yellow fever, spirochaetal jaundice, and inanition.

*Blood calcium*—Reduced in icterus due to precipitation of bile (Kolmer), and tropical

and non-tropical sprue (Trumper and Cantarow), and in alkalosis. (T. and C.)

*Carbon dioxide*—Decreased in acidosis, prolonged vomiting, or diarrhea. (Kolmer). Increased in pyloric and upper intestinal obstruction, and in individuals receiving excessively large doses of alkalis. Test indicated when B. U. N. over 30 mgm.

*Scrum protein*—albumin—globulin—ratio—plasma albumin normal=4.5 to 5.5 gm. per 100 c. c.

*Sedimentation of Erythrocytes*—(Kolmer). It is not always a special or specific test for any disease and is not in any sense diagnostic.

*Wassermann and Kahn*—Always of diagnostic significance, if positive.

*Blood sugar*—Of value as to determining the presence of diabetes and hyperinsulinism.

*Blood creatinine*—Should be determined if blood urea nitrogen is high; a valuable check on urea nitrogen. Low creatinine in a serious disease gives a favorable prognosis.

*Blood uric acid*—Abnormal elevation may occur as the result of intestinal obstruction.

*Red blood counts*—Evidence of anemia, primary or secondary; polycythemia.

*Haemoglobin*—Decreased in cases of anemia and hemorrhage.

*White blood counts*—Evidences of leukemia, myelogenous or lymphatic; or of infection.

*Blood platelets*—Reduced in anemia.

*Clotting—retraction*—coagulation time and volume index sometimes should be estimated.

*Color and Saturation Index*—In secondary anemia they are normal or reduced; in chlorosis they are reduced; and in pernicious anemia they are increased.

*Fragility of R. B. C.*—Of value in haemolytic jaundice and in chronic obstructive jaundice.

#### UROBILINOGEN

In conditions of moderate hepatic damage, in complete biliary obstruction, cholangitis, and hemolytic jaundice is an indication of defective hepatic function. In pure hemolytic icterus, although the function of the liver may be unimpaired, it cannot metabolize completely the excessive amounts of bilirubin formed from the increased quantity of bilirubin which passes into the bile.



Urobilin and excessive amounts of urobilinogen are found in the urine in hepatic functional impairment due to portal cirrhosis; and in hepatic disease, as acute and sub-acute yellow atrophy of the liver, arsphenamine hepatitis, other forms of toxic hepatitis, yellow fever, and phosphorous, chloroform and carbon tetrachloride poisoning.

It is frequently observed in the very early and very late stages of catarrhal jaundice, being absent during the stage of complete biliary obstruction. It is also observed in incomplete biliary obstruction.

The occurrence in obstructive jaundice is indicative of incomplete or intermittent obstruction, with concomitant liver damage or biliary tract infection.

Urobilinuria is not pathognomonic of any one morbid condition, its main diagnostic significance being that some bile is entering the intestine and that the functional activity of the liver is either very considerably impaired or that there is infection of the bile ducts. (6)

#### GASTRIC ANALYSIS

The fractional test meal was introduced particularly by Rehfuess, in 1914, who believed that the study of gastric secretion, extended over a long period of time, would give accurate information as to the function of the stomach in health and disease. In quite a large number of gastric conditions this chemical method is in many ways useful, and sometimes indispensable. It is of great value, not only in diagnosis, but also in treatment and prognosis. Thus, in mechanical dyspepsias, due to pyloric obstruction, benign or malignant, in gross ulcers, after operations, in chronic gastritis, in Addisonian anemia, the chemical examination of gastric contents can rarely be justifiably omitted, and is unquestionably of great help in diagnosis.

Samples are examined for their physical characteristics, their volumes are estimated, their odour and reaction noted, and they are tested for the presence of undigested food, bile, blood, mucus and starch. Then, after filtering, they are subjected to chemical examination for determination of acidity. In special cases, pepsin and chloride estimations are also performed. Lastly in the case of the

fasting stomach, the contents are examined microscopically.

It is wise to consider the volume of resting juice, if over 50 c. c., as a sign of stasis or hypersecretion.

The presence and amount of free HCL is tested and total acidity is then determined.

There is generally a difference between the curves of free and total acidity of 10 to 15 cc. and they run closely parallel.

#### Gastric Curves

*Normal curves*—The apex of the curve is reached at from 60 to 90 minutes after the test meal and a return to within 20 degrees of the fasting acidity occurs in two hours. The apex values average: Free HCL acid 45 to 55, total acidity 55 to 60. This is the most frequent type of curve found in normal individuals, but there is often a wide deviation from this normal contour in otherwise normal people.

*Hyperchlorhydria curve*—The contour of this curve conforms to the normal curve except that the acid values are much higher. The fasting acidity will be free HCL, acid, 40; total acidity 55 or higher; the apex of the curve will show free hydrochloric acid, 75; total acidity 90 or higher. This type of curve is occasionally found in normal individuals, but more commonly in cases of early or incipient gastric ulcer.

*Step ladder curve*—Described by Lyon and Best and supposed to be of serious diagnostic import. According to these observers it is only seen in cases of active ulcer, and usually precedes or follows a hemorrhage. The smooth ascent of the curve is broken by drops in both free and total acid unassociated with biliary regurgitation, followed by a rise to a still higher level than that preceding the drop. The actual acid values are usually much above normal in this type of curve.

*Extragastric curve*—The acid values, instead of starting to recede after 60 to 90 minutes, continue to rise, the last extraction having the highest acid values. This type of curve is very suggestive of pathology—outside of the stomach—duodenal ulcer, appendicitis, and sigmoiditis are the more common diseases associated with this curve. In duodenal ulcer, appendicitis, and early in the course of chole-

cystitis the acid values are apt to be above normal.

*Delayed digestive curve*—Is also sometimes called psychic achylia. There is a primary small rise followed by a drop, the acid values remaining very low until 60 to 70 minutes after the meal, when the acid again rises and goes through a normal curve. The primary rise probably represents the psychic secretion, and the secondary rise the hormonal. The latter is delayed in appearance.

*Hypochlorhydria curve*—May be benign or due to carcinoma of the stomach. There may be no free HCL acid or but small amounts, being under 40, throughout the two hours. The total acidity is low, being under 40, or reaching about 40 toward the end of the first hour. (1) (2) (3) (4) (5) (6) (7)

### Lactic and Other Organic Acids

These are to be tested for especially in cases of low acidity, or if there are indications of stagnation and fermentation. It is not pathognomonic of gastric cancer. It may be present in non-malignant as well as in malignant cases, whenever there is food retention occurring under conditions of very low acidity.

### Peptic Activity of Gastric Contents

Normally, the stomach secretes two enzymes, pepsin and rennin; they need only be looked for, if there is achlorhydria.

### Histamine

It is used to differentiate true from false achylia; in true gastric anacidity, it does not produce free HCL secretion (because of an in-born error of secretion or degeneration of the gastric secretory glands); in false or functional achylia it stimulates the mucus membrane to secrete not only acid, but some pepsin as well. In constitutional achylia and in achylia following an atrophic gastritis, no acid is secreted after the injection. In false achylia, on the other hand, acid is secreted after the stimulation. (1)

### Neutral Red

Injection of 4 to 5 c. c. of a 1% aqueous solution of neutral red, intramuscularly, if dye is normally secreted by gastric mucosa, the juice becomes red in 15 minutes after injection. In cases of complete achylia from organic change in the gastric mucosa, no red

color will appear. In cases of hyperchlorhydria, the dye appears as early as within 15 minutes, while in subacidity it may appear as late as after 45 minutes. (1)

The variations obtained in the secretion of hydrochloric acid in health and disease may be so great that it will not by itself enable us to diagnose disease with certainty. An exception to this fact is seen in Addisonian anemia, in which achlorhydria is almost always present. In its absence, the diagnosis of this disease is unjustifiable. In the great majority of cases of this anemia, histamine has no effect. This is in contradistinction to the anemia of sprue, in which achylia responds to histamine stimulation.

It would seem obvious, therefore, that diagnostic criteria based only on the results of gastric analysis may be inadequate. There are, however, some gastric charts which are suggestive, and sometimes characteristic, of certain diseases. The rising acidity and delayed emptying of the stomach in cases of ulcers situated near the pylorus, the typical charts of pyloric stenosis, and the curves in various conditions of anacidity and their differentiation by using modern technique, are all commonplace knowledge.

Lastly, with the use of histamine as a stimulus to gastric secretion, it is becoming of great importance to revise our views on the pre-existing conditions of achylia. People who fail to secrete free acid after a test meal may now give a normal response after histamine stimulation. Thus, true anacidity is shown to be quite a rare condition. (1)

### TESTS OF PANCREATIC EFFICIENCY

There are no standard units and no standard tests for estimation of such function. In chronic pancreatitis: (1) No tests are reliable; (2) feces examination indicating possible dysfunction record 25% fat and 1% neutral fat—undigested meat fibres. In acute pancreatitis Wohlgenarth diastase test is only 25% accurate. (Johnson) (8)

### BILIARY DRAINAGE

Utilization of duodenal intubation with abstraction of overnight fasting duodenal residual bile for macroscopic and microscopic examination, plus the added expulsion from the gall bladder, under the stimulation of mag-

nesium sulphate (25%) instillation via duodenal tube of dark mahogany bile, if the ducts or gall bladder are unoccluded or blocked, constitutes a reliable index to their physiologic or pathologic status.

In the presence of obstruction of the ducts or the gall bladder, "B" (dark gall bladder bile) will not be obtained, yielding prima facie evidence of a non-functioning organ.

The presence of either cholesterol crystals and calcium bilirubinate pigment, alone, is indicative of cholelithiasis, and if concomitantly present, such is proof positive of this mal-condition.

Parasites or ova may be found, especially in the duodenal juice, as: *uncinaria americana*, or *lamblia intestinalis* (giardiasis).

Usually when cholesterol crystals and calcium bilirubinate pigment are found in combination or singly, Roentgenological evidence of gall stones is superfluous, as the diagnosis of cholelithiasis or cholesterosis is definitely established.

#### LIVER FUNCTION TESTS

The bromsulphalein, Van den Bergh, icterus index, galaetose and levulose, blood phosphatase tests may all be used to determine impairment of hepatic function. Frequently several have to be used in the same case to determine the degree of involvement and progress of the disease and to differentiate between obstructive and hepato-cellular jaundice.

#### SIGMOIDOSCOPIC EXAMINATION

Is of use in determining mal-conditions of rectum and sigmoid, affords information not available by x-ray, and accords opportunity to make direct cultures.

#### EXAMINATION OF STOOLS

The collected feces should be free from urine, and the specimen should be subjected to the following: macroscopic, microscopic, in all cases, and chemical examinations.

Chemical analysis is important only for detecting occult blood in cases of ulceration or carcinoma of the alimentary tract. (1)

Various digestive disturbances are caused by ascaris and taenia; serious anemias by *di-bothriocephalus latus* and *ankylostomiasis*, and dysenteries by *amoebiasis* and *bilharziasis*.

As to the amoebiasis in untreated cases of amoebic dysentery, the criterion by which a diagnosis can be made is by finding the living motile *entamoeba histolytica* in the stools.

#### RADIOGRAPHY

Radiography is of extreme importance, revealing pathologic conditions of gastro-intestinal and biliary tracts. Ulcer is usually manifested as a niche or addition to the outline of a viscus. Carcinoma is generally portrayed as a subtracation defect of visceral morphology.

Cholecystography, oral or intravenous, as a means of detecting disease of the gall bladder has proven to be of inestimable value.

A barium enema is of importance in determining the presence or absence of disease of the colon, whether ulcerative, or fungating, or exhibiting diverticulosis, zonal spasm or functional dyscrasia.

The fundamentals heretofore presented are but elementary, the basis of concept with which each and every gastroenterological problem must be viewed, and with adherence to such schemata, the door to their solution may be opened to our successful entrance.

#### BIBLIOGRAPHY

1. Arafa, M. A.: *Modern Aspects of Gastro-Enterology*, 1933.
2. Hurst, Arthur F., and Stewart, Matthew J.: *Gastric and Duodenal Ulcer*, 1929.
3. Kolmer, John A., and Boerner, Fred: *Approved Laboratory Technique*, 1931.
4. Crohn, Burril, B.: *Affections of the Stomach*, 1927.
5. Rehfuess, Martin C.: *Diagnosis and Treatment of Diseases of the Stomach*, 1927.
6. Trumper, Max, and Cantarow, Abraham: *Bio-Chemistry in Internal Medicine*.
7. Bockus, Harry L.: *Lectures on Gastro-Enterology*, Graduate School of Medicine (The Medico-Chirurgical College of the University of Pennsylvania) 1931-32.
8. Johnson, Thomas: *Pancreatic Tests*, 1934.

### CERTAIN ASPECTS OF CALCIUM THERAPY\*

ABRAHAM CANTAROW, M. D.  
Philadelphia, Pa.

Medical literature in the past ten years has been filled with reports of factors influencing calcium metabolism and their therapeutic applications. The mere fact that substances are being used in such a wide variety of conditions, with such enthusiastic results leads conservative clinicians to feel that there is little rational basis for any practical application of these substances. Despite this, one must not lose sight of the fact that there is no doubt at the present time that calcium, the parathyroid

\*Read before the New Castle County Medical Society, Wilmington, January 15, 1935.



hormone and vitamin D have very definite uses. I hope, in the time I spend here with you, to point out the rational basis of calcium therapy in practical medicine.

Because calcium is a normal constituent of the body we are apt to feel that calcium therapy should be applied only in conditions where there is calcium deficiency. There is no doubt that this is the general feeling among practitioners, but one must not lose sight of the fact that besides being a normal constituent of the body, calcium has certain well-defined pharmacological properties.

Therefore, calcium therapy may be divided into two fields. The first is specifically directed toward the correction of states of calcium deficiency. The second is that in which calcium is used for the purpose of producing a purely non-specific effect. These two groups must be very definitely kept sight of. A few statements should be made regarding the functions of calcium in the body. The formation of bone is one of the most obvious. One important fact which has been developed as a result of recent investigation in calcium metabolism is that the calcium deposit in the bones is of such a nature that calcium can be very readily withdrawn from the bones through the operation of certain processes. It is probably well to think of the calcium deposit in the bones as of glycogen stored in the liver, delivering glucose to the blood very readily. The same is true of the calcium phosphate deposit in the bones. We should consider it a readily available storehouse of calcium in the body. Another normal function of calcium is in connection with coagulation of the blood. Its place can be taken by other elements, but under normal conditions calcium is absolutely essential for coagulation.

Calcium is essential for the normal excitability of nerves and muscles, and to the normal contraction of the heart and the maintenance of the normal cardiac cycle. From a therapeutic standpoint its action seems to be similar to digitalis and, according to some pharmacologists, the two act synergistically.

Another very interesting action of calcium is that it modifies the actions of certain drugs. By altering the proportion of calcium in the fluid in which the experiment is being carried

out, the action of cocaine can be reversed. The same has been shown with regard to the actions of several other drugs. This aspect of the pharmacology of calcium is receiving a great deal of attention at the present time. One action of calcium, which I want to mention particularly, is the one which I believe is responsible for the effect of calcium in a great many cases in which it is applied as a non-specific agent, namely, its effect upon the permeability of membranes. Calcium diminishes the diffusibility of substances through membranes. That knowledge was not applied very definitely clinically until comparatively recently. Even now, it is not generally appreciated that the effect of calcium therapy in a great many conditions results from its action in diminishing the permeability of cell membranes. Experimentally, several methods have been employed to demonstrate this action of calcium. Place a slice of red-beet root in ordinary tap water. The pigment remains in the cell. But take the same beet root and put it in a solution of 1.8% sodium chloride and the pigment diffuses out, the salt solution becoming red and beet root light. The addition to the solution of a small quantity of calcium will neutralize this effect of the sodium chloride and the pigment will not diffuse out of the beet root. The action of calcium is to inhibit the passage of this pigment through the cell wall. This illustrates the tremendous effect which calcium has on certain vital processes. Most of the cell membranes of the body are impermeable to most substances in the resting state. There are only a few substances which can pass through a cell membrane under certain conditions, namely, alcohol, ammonium salts, and urea. However, if cells are to function, many substances must pass in and many have to pass out. The varying permeability of a cell membrane under conditions of normal function is probably dependent to a large extent upon changes in the ratio between sodium and potassium in the fluid bathing of the cells.

A few words with regard to the requirement of calcium. It has been known for a long time that the average American adult diet has an extremely low calcium content, due chiefly to its very low content of dairy prod-

ucts. According to Sherman and most investigators, it is far below the average adult requirement. Sherman believes that the average diet should contain one gram of calcium in every twenty-four hours. The average American diet contains less than one-half of that. Sherman has shown that although animals may apparently grow normally, if their diet contains an abundance of calcium, they reach maturity sooner and their period of normal maturity is prolonged. I think the facts that Sherman has developed indicate very thoroughly that one of the features of our diet which is sadly in need of correction is that of its calcium content.

The normal calcium content of the blood is from nine to eleven mgm. per 100 c. c. This consists essentially of two components, one termed diffusible and the other non-diffusible, according to whether it can or cannot pass through the cell wall. Approximately half of the calcium can get out of the blood and one-half cannot. The half that cannot is believed to be combined with proteins in some way, preventing its diffusion through the capillary walls into the tissues.

There are two important factors which must be considered in connection with calcium therapy. One is vitamin D, and the other parathyroid hormone. Although the mode of action of vitamin D is not definitely known, we do know a great deal about it. Vitamin D, when administered to any animal increases the serum phosphorus. It also increases the serum calcium and causes retention of calcium and phosphorus in the body. If one administers vitamin D continuously, one finds that the animal passes into a state of positive calcium and phosphorus balance. No definite conclusion as yet has been reached about the exact manner in which vitamin D produces these effects but the general belief is that it either increases the absorption of calcium and phosphorus from the intestines or increases its utilization in the tissues. Parathyroid hormone decreases the serum phosphorus, increases the serum calcium and causes increased elimination of calcium and phosphorus from the body, particularly the latter. You can see very readily from the physiologic standpoint that the action of vitamin D and

parathyroid hormone are alike in only one respect, in that they increase the serum calcium. This one point of similarity has lead a great many practitioners to employ them more or less indiscriminately in conditions in which one may be indicated and the other contra-indicated. The parathyroid hormone probably acts by increasing the elimination of bone calcium and phosphorus from the bones and, in my opinion, the point of attack of the two substances is entirely different. In very few conditions are both indicated.

Tetany is the characteristic manifestation of calcium deficiency. Deficiency in vitamin D most commonly occurs in infants and its most important clinical manifestation is rickets, which is typically associated with a decrease in the serum phosphorus. The serum calcium may remain normal for a long time in rickets. When the condition of vitamin D deficiency progresses to the point where the serum calcium is diminished rickets becomes complicated by infantile tetany. This is one indication for a form of specific calcium therapy, namely, vitamin D. The administration of calcium salts or parathyroid hormone will relieve the tetany in many instances but will not relieve the underlying condition; parathyroid hormone in fact, may do harm. The latter will not produce the same effect as vitamin D; it may produce physiologic changes which are exactly the opposite of those you desire. Primary parathyroid deficiency is relatively rare. Juvenile tetany, which may be of parathyroid origin, is not very common and infantile tetany is usually due to vitamin D deficiency. An individual with tetany of parathyroid origin has characteristically an increase in the serum phosphorus, whereas, tetany due to vitamin D deficiency is associated with a decrease in serum phosphorus. If one studies the calcium and phosphorus balance, which is not ordinarily done, one finds that in tetany due to vitamin D deficiency the individual is losing calcium and phosphorus and in parathyroid deficiency he is gaining calcium and phosphorus. This indicates, I believe, the importance of determining the serum phosphorus in such cases. The serum calcium should never be determined without

the serum phosphorus since the former, in itself, may be deceptive.

There are a great many conditions other than tetany in which calcium therapy is employed. Some of those have a very definite basis, a great many do not. There are some that I should class as semi-specific, in which some authorities believe specific indications exist and others are doubtful. At the head of this list I would place pregnancy. Up until ten years ago pregnancy was studied intensively from the standpoint of changes in organic metabolism, and certain very definite changes were shown to occur. Recently, more striking changes have been shown to occur in calcium and phosphorus metabolism. It has been shown, for example, that during pregnancy the mother retains tremendous amounts of calcium; as the pregnancy progresses more and more calcium and phosphorus are retained in the body. Abruptly, with the termination of pregnancy and the institution of lactation, tremendous quantities are poured out of the body, the state of marked positive balance changing to one of very pronounced negative balance. Part of this loss occurs in the milk, but not all can be accounted for in this way; more calcium has been found in some cases in the feces than has been ingested during lactation. The reason for this is not known exactly. We know that the mother has to retain a certain amount of calcium in order to satisfy the requirements of the foetus and that these requirements are rather high. At the twenty-eighth week of pregnancy the foetus contains about five and one-half grams of calcium; at the thirtieth week the foetus contains over 45 grams, draining from the mother an average of 0.1 grams of calcium a day. If the mother is taking an average American diet, which in itself is less than the average non-pregnant woman needs, if the foetus is to receive its adequate calcium supply the mother is being drained of excessive quantities of calcium. I think one of the greatest advances in the maintenance of normal nutrition during pregnancy, has developed out of the recognition of this fact. During pregnancy, the woman needs a much greater supply of calcium than during the non-pregnant state. One of the most notable

diseases which occurs as a result of this is osteomalacia which is not seen very much in this country. This has been recognized as being essentially adult rickets. It occurs particularly during pregnancy because the calcium requirement of the woman is much greater than the normal adult requirement. Osteomalacia should be capable of eradication, just as rickets should be capable of eradication. Other symptoms that occur during pregnancy have been attributed to a state of calcium deficiency. Emotional and physical irritability, muscular spasms, cramp-like pains and other symptoms have been attributed to a state of mild calcium deficiency. The condition of the teeth during pregnancy has been attributed to a state of mild or severe calcium deficiency but there is a great deal of discussion at the present time as to whether or not adult teeth can be affected in this way. However, I believe it good practice to employ calcium therapy routinely during the latter months of pregnancy.

Another condition in which semi-specific disturbances of calcium metabolism exists is hyperthyroidism. There may be marked demineralization of bones and, if one studies the calcium balance, one finds that the output of calcium is greatly in excess of the intake. That is not purely the result of an increased metabolic rate. Experimentally, exophthalmic goiter has been produced in animals maintained on a low iodine, high calcium diet. The calcium seems to increase the effect of iodine sufficiency. It is very difficult on this basis to see why the administration of calcium would do good in cases of hyperthyroidism but enthusiastic reports have appeared in the literature regarding the beneficial effect of calcium therapy in patients with hyperthyroidism. My advice would be that it should not be employed, at least until we know more about it.

Another point, which has been brought out by Joslin, is that diabetes mellitus, particularly in children, is almost regularly associated with a calcium loss in the body. The output of calcium is greatly in excess of the intake. Their diet is usually low in calcium and is particularly below the requirement of a child during the period of active growth. It



has been shown that diabetes in children, particularly if it is not well controlled, is almost regularly associated with rarefaction of bones, in some cases with spontaneous fractures and particularly with dental disturbances. There is some doubt as to whether changes in calcium metabolism can affect the teeth in adults. There is not much doubt as to whether it can change the growth of the deciduous teeth but after the permanent teeth are fully calcified there is some doubt as to whether changes in calcium metabolism will change their structure. Joslin has shown that the administration of a high calcium diet, to children particularly, rapidly restores the normal dental condition and corrects many errors which previously resisted treatment. I have hinted at the question of dental caries. The problem of dental caries is one of the most important health problems in children today, and we are not much nearer the solution today than we were several years ago. There are just as many theories and they are just as diametrically opposed today as they were a few years ago. However, I think that in children particularly, with dental caries and tendency toward softness of the teeth, the administration of calcium should be made a matter of routine. In some cases it has remarkably improved the condition of the teeth.

There are some non-specific conditions that are associated with no demonstrable disturbances of calcium metabolism. First of all, lead poisoning. Lead poisoning is one of the most important of the industrial hazards. Our treatment at the present time has been placed upon a rather secure basis. The metabolism of lead in the body resembles that of calcium. The storage of calcium will cause a storage of lead in the bones and removal of calcium will remove lead. During the stage of acute toxemia, in which excessive amounts of lead are circulating in the blood, an effort should be made to remove lead from the blood and store it in the bones. The storage of lead in the bones can be hastened by the administration of calcium and phosphorus. High calcium diets and the administration of calcium salts should be employed. After the toxic symptoms have subsided one can remove the lead from the bones by removing the calcium from the

bones. Parathyroid hormone is the agent which has been found to be most effective. After a period of time most of the lead can be removed in this way. Others are ammonium chloride and similar substances that produce acidosis. Also, due to its antispasmodic effect, calcium will relieve gall bladder colic and ureteral colic. Patients with lead colic can be relieved almost miraculously before the injection of calcium is completed. The colic subsides sometimes before ten c. c. of calcium have been injected intravenously. If it is not relieved by calcium it is probably not lead colic.

Calcium has also been used in allergic disorders, as in skin disorders of the moist type, particularly those which follow the administration of drugs, such as luminal. The treatment of asthma by the use of calcium has been very severely attacked by many men because no evidence of calcium deficiency has been demonstrated. I hope that you appreciate the fact that this objection is not a valid one. From a clinical standpoint, a great many patients are relieved. I think the administration of calcium in allergic conditions is certainly worth a trial.

Calcium therapy is particularly desirable in hepatic diseases and in jaundice. It has been shown that in acute diseases of the liver, and the acute forms of hepatitis produced by certain drugs, there is an increased concentration of guanidine in the blood. Before parathyroid hormone was discovered it was believed by many that tetany was due to an excess of guanidine in the blood. Guanidine produces symptoms which are much like those of calcium deficiency, and which can be combatted by the administration of calcium. Minot and Cutler found that dogs to whom carbon tetrachloride was administered, would die within forty-eight hours with symptoms identical with those of guanidine intoxication. They found that if bones were included in the diet the dogs would not die and would apparently get along well with doses of carbon tetrachloride far in excess of those given to the other dogs. The development of these symptoms could be controlled by calcium and calcium checked the symptoms after they had developed. Out of this observation developed

the idea of calcium therapy in patients with acute hepatic lesions; such patients die not so much because of the liver lesion as because of the associated toxemia. The liver regenerates very rapidly and, if they can be tided over the period of acute toxemia, which can be accomplished experimentally by calcium therapy, they may recover completely. I believe that in all patients with acute hepatic lesions calcium should be administered more to prevent these manifestations than anything else.

In the administration of calcium I believe that the best salt to employ is calcium gluconate. It is useless to give it in the ordinary pharmacopeial dosage. One finds that calcium is still being prescribed in doses of five, ten, fifteen and twenty grains after meals. You might just as well throw it out the window. Calcium gluconate is given in doses of one teaspoonful three times a day, before meals, or three to four hours after a meal, since calcium is least absorbed when the alkalinity of the duodenum is highest. Regardless of what type of calcium therapy you are employing, given by mouth it will have to be given before the meal. Calcium levulinate is given in doses of 40 grains, and calcium chloride, more irritating but most effective, 30 grains; these can also be given intravenously. The gluconate and levulinate can be given intramuscularly. If you give ten c. c. (10-20% solution) it is probably better to give it in two different areas. I think it is not wise to give ten c. c. all in one spot. Parathyroid hormone can be given in doses of thirty to forty units at one injection, and should not be repeated more than once in every twenty-four hours. Parathyroid therapy is not commonly employed over a long period of time, except in patients with parathyroid tetany.

## THE COSTS OF PRESCRIPTIONS AND PROPRIETARY DRUGS

GEORGE J. BOINES, M. D.  
Wilmington, Del.

This paper is offered with the idea of bringing to your attention the average cost of the ordinary prescription, and to outline briefly the difference in price between the well-advertised proprietary drug and the same drug sold as a chemical.

It is natural that the druggist expects a certain profit on the prescriptions that he fills; in cases where the drug is not in popular demand and the druggist must buy a larger quantity than the prescription calls for, then the cost of the prescription will be higher; for this reason if the drug would be ordered in the same quantity as the druggist has to buy it, then the cost to the patient will be much less for the amount of medicine he receives.

The prices which drug stores charge for ordinary prescriptions are more or less uniform. Usually the larger the quantity of the drug the cheaper it is in proportion. The usual charges on regular prescriptions are as follows:

| Liquids          |        | Ointments           |        |
|------------------|--------|---------------------|--------|
| One oz. ....     | \$ .25 | Half oz. ....       | \$ .35 |
| Two oz. ....     | .45    | One oz. ....        | .50    |
| Three oz. ....   | .60    | Two oz. ....        | .75    |
| Four oz. ....    | .75    |                     |        |
| Six oz. ....     | 1.00   | Capsules or Powders |        |
| Eight oz. ....   | 1.25   | Twelve ....         | \$ .50 |
| Pills            |        | Eighteen ....       | .65    |
| Twenty-four .... | \$ .60 | Twenty-four ....    | .75    |
| Thirty ....      | .75    | Thirty ....         | .90    |

From this list it is evident that where renewal of the prescription is anticipated it will be cheaper for the patient to get the larger quantity with the original prescription.

It is a matter of everyday occurrence where a doctor tells his patient that the prescription should cost so much, but when the drug store is reached the price is much higher, not because the druggist overcharges but because the preparation ordered is more expensive than the physician imagined. During prosperous times patients would register no complaints about the costs of medicines, especially when special trade marks and fancy names are prescribed. Of late years, however, when cash has become less abundant patients have to figure closely, because in many cases after the medicine is bought there is nothing left for the fees of the charitable M. D.

On the list prices stated below, the druggist usually adds 25% to 50% for filling a prescription of any kind.

Below follows a list of some of the commonly prescribed preparations and the prices as of June 1, 1935, that the druggist pays to the wholesaler:

| U. S. P. PREPARATIONS               |        |    |     |
|-------------------------------------|--------|----|-----|
| Syr. Hydriodic Acid (Lilly) .....   | 16 oz. | \$ | .78 |
| Elfx. Lactated Pepsin (Lilly) ..... | 16 oz. |    | .60 |

(Concluded on Page 156)



# EDITORIAL

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W. EDWIN BURD, M. D. .... EDITOR  
Du Pont Building, Wilmington, Del.

WILLIAM H. SPEER, M. D. .... Associate Editor  
917 Washington St., Wilmington, Del.

M. A. TARUMIANZ, M. D. .... Associate Editor & Bus. Mgr.  
Du Pont Building, Wilmington, Del.  
Telephone, Wilmington, 4368

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### A SURPRISING CHARGE

In a charge to a grand jury Federal Judge George W. McClintic, of West Virginia, said that bridge-playing nurses were responsible for patients becoming drug addicts. In their enthusiasm for the game and their dislike of stopping in the middle of a rubber to attend a call to the sick room, nurses, the judge said, adopted the efficacious method of doping their charges.

In Dickens' day, nursing was given over largely to the Sairey Gamps and Betsy Prigs. Those estimable ladies, being much addicted to gin and coweumbers, were worse to combat than the most virulent diseases. "A mustard poultice on your baek" was one of Sairey's sovereign remedies for whatever ailment, accompanied by some such admonition as that "if you should turn at all faint, we can soon revive you. I promise you. Bite a person's thumbs, or turn their fingers the wrong way and they come to wonderful. Lord bless you." But it would be surprising, indeed, if the prototypes of these guardians of the sick room survived to these times.

Bridge has its lure and the statement of a member of the Federal bench is not to be lightly taken. But the charge brought against West Vir-

ginia hospitals is so shocking as to be difficult of belief. It has been given such wide publicity, however, that in justice to these institutions and to the nursing profession, the allegations should not be permitted to pass without answer.

—Editorial, *Baltimore Sun*, June 29, 1935.

"The allegations should not be permitted to pass without answer," nor will they be, for in due time the hospitals of West Virginia can be counted upon to demonstrate satisfactorily that they—in common with the hospitals of all the other States—do not make drug addicts of their patients.

The United States judges have perhaps established an "all-time high" record for fidelity to duty. If our memory serves us correctly, in the 146 years since the Federal courts were established, only six Federal judges have been impeached: of these, three were acquitted, one was found guilty, one resigned, and one committed suicide. Three of these impeachments came during the staging of our national farce-comedy entitled "Prohibition." Presumably, then, there were only three derelict Federal judges in 146 years—and that is a record for any profession to be proud of.

No man who shoulders the responsibilities of a Federal judgeship speaks flippantly when charging a grand jury, so one must assume that the West Virginia jurist has unearthed a case that warrants investigation. However, even if the instant case should prove to be as alleged, it would represent in the American hospital world as rare and as sporadic an instance of dereliction of nurses as is cited above in the rarity of dereliction of Federal judges. We, who from daily contact know hospitals from the inside out, know that "doping their charges" is just about the least of their shortcomings, and should one isolated instance of such a conscienceless thing be proven (and we hope punished), the unexampled efficacy and service of the American hospital will still stand unchallenged. When it comes to charity, utility, or fidelity, we defy Judge McClintic—we defy the world—to prove that the American hospital takes second place to *any* institution, be it legal, lay, or what-not.



The annual outing of the New Castle County Medical Society was held at Farnhurst on June 18th. The inclement weather drove the mediceos indoors; nevertheless, a most enjoyable afternoon of games and dinner was spent. The Society takes this opportunity to thank those who donated the prizes, cigars, etc.

The State medical licenses, previously obtained as follows: regulars, seven passed, three failed; homeopaths, 6 passed, 2 failed; osteopaths, 1 passed, 3 failed; total, 14 passed, 8 failed.

The State medical licenses, previously obtained from the Clerk of the Court in each county, can now be obtained only from the State Tax Department. The 1935 application blanks have to be sworn to. This is a new wrinkle, and to our mind, a ridiculous one, at least so far as concerns the licensed professions. When one is required to swear that he was duly licensed *last* year, he is in effect, swearing to the records of the State of Delaware. Surely, the State of Delaware has accurate records of its licenses, and it is ridiculous to ask the citizens to prove to the State that they were entitled to and received what the State itself gave them—their license. If we have to go through the same tomfoolery next year, we won't swear *to* the blank—we'll simply swear *at* it, and say to the Commissioner: "You ought to know."

### The Costs of Prescriptions and Proprietary Drugs

(Continued from Page 154)

|                                                      |        |      |
|------------------------------------------------------|--------|------|
| Iron, Quinine and Strychnine (Lilly) .....           | 16 oz. | .60  |
| Morph. Sulph. gr. 1/4 100 tab. (Hypo) (Lilly) .....  |        | 1.26 |
| Morph. Sulph. gr. 1/8 100 tab. (by mouth) (Lilly) .. |        | .96  |
| Sodium Bromide tab. 100 (Lilly) .....                |        | .36  |
| Sodium Bromide tab. 1000 (Lilly) .....               |        | 2.43 |
| Bromide Efferv. Diskets 25 (Lilly) .....             |        | .43  |
| Tinct. Digitalis, fat free, one oz. (Lilly) .....    |        | .36  |
| Sodium Bicarbonate (Merck) .....                     | 4 oz.  | .05  |
|                                                      | 8 oz.  | .10  |
| Potassium Citrate (Merck) .....                      | 4 oz.  | .28  |
|                                                      | 8 oz.  | .40  |

#### PROPRIETARY PREPARATIONS

|                                          |        |        |
|------------------------------------------|--------|--------|
| Syr. Hydriodic Acid (Gardner) .....      | 16 oz. | \$1.40 |
| Elix. Lactopeptin (Reed) .....           | 16 oz. | 1.25   |
| Metatone (P., D. & Co.) .....            | 12 oz. | .92    |
| Incretone (Carnick) .....                | 6 oz.  | 1.00   |
| Elix. Arsilen Comp. (Roche) .....        | 6 oz.  | .75    |
| Pantopon (Roche) gr. 1/6 100 tab. ....   |        | 3.75   |
| Dilaudid (Merck) gr. 1/16 100 tab. ....  |        | 4.00   |
| Allanol (Roche) 12 tab. ....             |        | .67    |
| Peralga (S. & G.) 12 tab. ....           |        | .63    |
| Ipral (Squibb) 10 tab. ....              |        | .35    |
| Sedormid (Roche) 10 tab. 2 gr. each ..   |        | .40    |
| Medinal (S. & G.) 12 tab. ....           |        | .45    |
| Bromide Efferv. (B. & W.) 25 lozenges .. |        | .72    |
| Elix. Medinal (S. & G.) .....            | 6 oz.  | 1.00   |

|                                           |        |      |
|-------------------------------------------|--------|------|
| Elix. Ipral (Squibb) .....                | 16 oz. | 2.20 |
| Sodium Amytal (Lilly) 40 3 gr. caps. .... |        | 2.00 |
| Digitalone (P., D. & Co.) .....           | 1 oz.  | .51  |
| Digalen (Roche) .....                     | 1 oz.  | .90  |
| Diditol (Mulford) .....                   | 1 oz.  | .63  |
| Digifortis (Ciba) .....                   | 1 oz.  | .96  |
| Citrocarbonate (Upjohn) .....             | 4 oz.  | .67  |
| Citrocarbonate (Upjohn) .....             | 8 oz.  | 1.00 |
| Bisodol (Bisodol Co.) .....               | 4 oz.  | .57  |
| Bisodol (Bisodol Co.) .....               | 8 oz.  | 1.05 |

The usual prescription charge for sedative tablets or capsules is ten cents per tablet or capsule, especially when less than ten or twelve are ordered.

For comparing the prices of proprietary drugs with the preparations of the same chemical composition or of the same chemical nature the following table is presented, giving the proprietary name and the manufacturer, with the prices for the quantity stated. The prices were obtained from the Sixth Edition (1934-35) of the American Druggist Price Book.

| Proprietary name and Manufacturer | Quantity | List Price | Chemical name or Composition.                                      | Price |
|-----------------------------------|----------|------------|--------------------------------------------------------------------|-------|
| Aristol (Winthrop) ..             | .1 oz.   | \$1.80     | Thymol Iodide (Merck) ..                                           | \$.44 |
| Vince (Warner) .....              | 1 lb.    | 1.40       | Sod. Perborate (Merck) ..                                          | .38   |
| Veronal (Winthrop) ..             | .1 oz.   | 3.00       | Barbital (Merck) .....                                             | .59   |
| " 5 gr. tab. ....                 | 10       | .40        | " " .....                                                          | .16   |
| " 5 gr. tab. ....                 | 100      | 3.60       | " " .....                                                          | .85   |
| Trional (Winthrop) ..             | .1 oz.   | 1.90       | Sulphonethylmethane (Merck) .....                                  | .72   |
| Sulphonal (Win.) .....            | .1 oz.   | 1.70       | Sulphonmethane (M) ..                                              | .59   |
| Luminal (Winthrop) ..             | 1/2 oz.  | 3.45       | Phenobarbital (Merck) ..                                           | .38   |
| " (Winthrop) .....                | 1 oz.    | 6.25       | " " (Lilly) .....                                                  | .68   |
| " 1/4 gr. tab. ....               | 100      | .63        | " " .....                                                          | .21   |
| " 1/4 gr. tab. ....               | 1000     | 6.00       | " " .....                                                          | .90   |
| " 1/2 gr. tab. ....               | 100      | 1.25       | " " .....                                                          | .25   |
| " 1/2 gr. tab. ....               | 1000     | 11.87      | " " .....                                                          | 1.59  |
| " 1 1/2 gr. tab. ....             | 50       | 1.25       | " " .....                                                          | .25   |
| " 1 1/2 gr. tab. ....             | 1000     | 24.40      | " " .....                                                          | 3.40  |
| " Elixir .....                    | 4 oz.    | .75        | " " .....                                                          | .34   |
| " Elixir .....                    | 12 oz.   | 2.00       | " " .....                                                          | .66   |
| Urotropin (Schering) ..           |          |            |                                                                    |       |
| " 5 gr. tab. ....                 | 50       | .45        | Methenamine (Merck) ..                                             | .28   |
| " 5 gr. tab. ....                 | 100      | .85        | " " .....                                                          | .45   |
| " 5 gr. tab. ....                 | 500      | 4.00       | " " .....                                                          | 1.65  |
| " 7 1/2 gr. tab. ....             | 20       | .30        | " " .....                                                          | .18   |
| " 7 1/2 gr. tab. ....             | 500      | 6.00       | " " .....                                                          | 2.10  |
| Theocin (Winthrop) ..             | 1/2 oz.  | 2.82       | Theochromine (M) 1 oz.                                             | .35   |
| Diuretin (Billhuber) ..           | 1 oz.    | 1.50       | Theochromine Sodium acetate (Merck) .....                          | .38   |
| Metaphyllin (Hurst) ..            | .1 oz.   | 8.45       | Theophylline (Merck) ..                                            | 2.21  |
| (66% Theophyllin) .....           |          |            | Theochromine Sodium Salicylate (46% Theo) .....                    | .29   |
| 1 1/2 gr. tab. ....               | 40       | 1.50       | Theamin (Lilly) (82.5% Theo) capsules .....                        | .85   |
| Aspirin (Bayer) .....             | .1 oz.   | .85        | Acetyl salicylic acid (Merck) .....                                | .15   |
| " 5 gr. tab. ..                   | 100      | .55        | Acetyl salicylic acid (Lilly) .....                                | .26   |
| " 5 gr. tab. ..                   | 1000     | 5.50       | Acetyl salicylic acid (Lilly) .....                                | 1.65  |
| Atophan (Schering) ..             | .1 oz.   | 2.75       | Cinchophen (U. S. P. (Merck) .....                                 | .35   |
| " 5 gr. tab. ....                 | 100      | 2.40       | Cinchophen (Lilly) ..                                              | .64   |
| " 7 1/2 gr. tab. ....             | 20       | 1.00       | " " .....                                                          | .30   |
| " 7 1/2 gr. tab. ....             | 100      | 4.00       | " " .....                                                          | .85   |
| Neo-Cinchophen 5 gr. ....         | .20      | .75        |                                                                    |       |
| (Amer. Pharm. Co.) ..             | 100      | 2.00       |                                                                    |       |
| 7 1/2 gr. tab. ....               | 20       | .64        |                                                                    |       |
|                                   | 100      | 2.65       |                                                                    |       |
| Phenacetin (Winthrop) ..          | 1 oz.    | .63        | Acet-Phentidin (M) ..                                              | .21   |
| Pyramidon (Metz) .....            | .1 oz.   | .82        | Amidopyrin (Merck) ..                                              | .46   |
| " 5 gr. tab. ....                 | 100      | 1.75       | " (Lilly) ..                                                       | .87   |
| " Elixir .....                    | 16 oz.   | 3.00       | " " .....                                                          | 1.59  |
| Silver Preparations .....         |          |            |                                                                    |       |
| (19 to 25% Ag.) .....             |          |            | Silver Protein Mild (Silver Nucleinate) (U. S. P. Merck) ..        | .52   |
| Lunargen (Lilly) ....             | .1 oz.   | .95        |                                                                    |       |
| Argyrol (Zonite Sales) ..         | 1 oz.    | 1.50       |                                                                    |       |
| Neo-Silvol (P. & D.) ..           | 1 oz.    | 1.50       |                                                                    |       |
| Silvol (P. & D.) .....            | 1 oz.    | 1.02       |                                                                    |       |
| Protargol (Winthrop) ..           | 1 oz.    | 1.25       | Silver Protein Strong (Silver Proteinate) (7 1/2 to 8 1/2% of Ag.) | .51   |

The brief list of prices outlined above is sufficient to emphasize the necessity of investigating the costs of drugs before they are prescribed.

## MISCELLANEOUS

### Policies Adopted By the House of Delegates

The annual session of the American Medical Association held in Atlantic City, June 10 to 14, was extraordinary from the point of view of its contributions to the advancement of medical science and as a demonstration of a well-nigh perfectly organized meeting. Letters are pouring into the headquarters office expressing commendation of the Scientific Exhibit and of the lectures presented in the General Scientific Meetings.

The House of Delegates functioned efficiently and completed its business with such celerity that many observers commented on the apparent quiet of the proceedings. This was no doubt due to the fact that the reference committees were so well selected and so assiduous in the performance of their duties that most difficulties were ironed out in the committees. Many listened for hours to those representing various points of view, and the reports which they brought in took cognizance of these expressions and were therefore adopted without opposition from the floor.

In THE JOURNAL, June 22, appeared the reports of the first session of the House of Delegates, wherein resolutions were introduced on radio broadcasting, contraception, medical care and the teaching of medical economics. The House of Delegates encouraged the Board of Trustees to do its utmost to control the broadcasting of fraudulent claims for pharmaceutical preparations and to eliminate the broadcasting of claims for alleged cancer cures from Mexico. By the action of the House of Delegates the Board of Trustees was authorized to appoint a committee to study problems concerned in contraception and to present a preliminary report to the House of Delegates at the 1936 session. The chairman of the Legislative Committee described in his report, which appears in this issue of THE JOURNAL, the manner in which the Association has co-operated with the American Legion and the Veterans' Bureau in relationship to medical problems affecting these groups. He described also the steps that have been taken to bring various medical organizations into accord with the policies of

the American Medical Association relating to economic problems. The Bureau of Medical Economics, pursuant to the action taken at the special session of the House of Delegates held in Chicago in February, presented at this time a report on more than two hundred plans now in operation in various parts of the country in an attempt to provide all the people with adequate medical care. This report of the Bureau, with various modifications, was adopted by the House of Delegates and will appear in an early issue of THE JOURNAL.

The actions of the House of Delegates as reported in last week's issue and in this issue of THE JOURNAL are given in considerable detail. It is desirable that all those who are interested in the policies of the American Medical Association make a thorough study of these reports and familiarize themselves with the problems concerned. Only to the extent to which all the membership of the Association is familiar with these activities and supports them can the Association function efficiently. —*Jour A. M. A.*, June 29, 1935.

---

### Integration of the Medical Profession

Recently there was introduced and passed in the legislature of the state of Oklahoma a statute integrating the dental profession. In the legal profession the movement toward integration has been under way for some years. Apparently there are movements afoot both in Oregon and in South Dakota for integration of the medical profession. This term implies the organization by statute of all licensed practitioners of medicine within a state into a public corporation, which corporation is authorized by law to determine the professional fitness of those who seek admittance into the profession in that state. The corporation would also be authorized to supervise and regulate the professional activities of every member of the profession. Thus it would determine who is and who is not eligible for admission, supervise the conduct of members, and reprimand, suspend or remove them when circumstances indicate the desirability of such action. Of course a member expelled from a corporation would thereby cease to be authorized to practice medicine. In such an integrated profession, every licensed prac-



tioner would be entitled to vote for the managers of the corporation and would also be assessed for the cost of its management. An integrated medical profession would therefore take over the activities of medical examining and licensing boards. The movement would not apparently have great popularity among physicians, who are, of course, on a different basis than either dentists or lawyers, because of the cultists of various types who enter into the practice of medicine and because of the strength and usefulness of voluntary medical organizations. Certainly until the situation has been much more extensively studied and all the possibilities worked out, the medical profession will do well to avoid being drawn into any such movement.—*Jour. A. M. A.*, June 29, 1935.

---

### A Cancer Clue

For the first time we see a spark of hope as to the cause of cancer. Dr. J. W. Cook of the Research Institute of the Cancer Hospital of Lindon has discovered a new clue to the cause of cancer—a chemical cause, which the *Druggists' Circular*, Feb., 1935, reports Dr. Francis Carter Wood, eminent New York cancer specialist, as saying "as important to the field of cancer as the discovery of the tubercle bacillus by Dr. Robert Koch in 1882 was to tuberculosis."

Dr. Cook's working theory was that there might exist in the human body harmless substances necessary to life but which become perverted and changed into cancer-producing substances for some reason. He took a bile acid normally produced by the body and subjected it to the processes similar to those which occur in the body, such as dehydration, oxidation, dehydrogenation and the removal of carbon dioxide.

"According to Dr. Cook, after the original bile acid, deoxycholic acid, was subjected to such processes, it was found to have changed into a hydro-carbon which was called methyleholanthrene. When this was applied to laboratory mice, it is said to produce cancer. Dr. Cook reported the substances to be 5:6 dimethyl—1:2 benzanthraquinone."

According to *Druggists' Circular*, Dr.

Wood said: "The discovery that a chemical substance found in the body can be changed into a cancer-producing substance gives us a key to the chemical nature of cancer. We have definite grounds for believing that some perversion of the normal processes in the body by making a slight change in the chemical structure of a health-giving sterol molecule may transform it into another substance that produces cancer. If we find out what causes this perversion, a way may be opened to find means for preventing it."

*Druggists' Circular* further reports recent correspondence with Dr. Wood: "We do not know as yet whether the transformation of deoxycholic acid into methyleholanthrene actually does occur in the body or not. All we know is that the chemical transformation was accomplished as stated by relatively simple processes which can occur in the body as they go on at temperatures not higher than 37° C. Hitherto all of the cancer-producing chemicals have been produced by distillation at high temperatures of a great variety of organic substances. This is the first instance in which a cancer-producing substance has been obtained by low temperature procedures."

We shall await further experiments with keen interest.—Editorial, *R. I. M. J.*

---

### St. Francis Hospital Staff

At the annual meeting of the Ex-Presidents' Association of the St. Francis Hospital the following officers were elected for the coming year: Dr. Morris Harwitz, president; Dr. Sidney Stat, vice-president; Dr. Petronio Alava, treasurer; Dr. Minna H. Sosnov, secretary. The outgoing president is Dr. George J. Boines.

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### Notice

It is the desire of The Journal to keep its directory page positively up to date and accurate. The various societies listed there elect their officers at different times during the year. The Journal would appreciate being informed promptly of any changes that should be made to keep the directory up to the minute.

## TONGUE IRRITATION

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*Some Clinical Observations on the Influence of certain Hygroscopic Agents in Cigarettes.*

Laryngoscope, 1935, XLV, 149-154★

### SEE ALSO

*Pharmacology of Inflammation: III. Influence of hygroscopic agents on irritation from cigarette smoke.*

Proc. Soc. Exp. Biol. and Med., 1934,  
32, 241-245★



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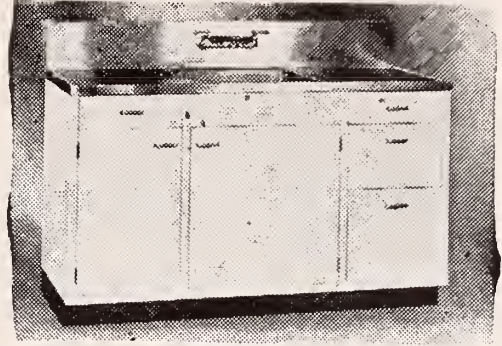
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INCORPORATED 1789

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## Loose Stools in Infants

require extra diapering, and inconvenience the mother

Clinically, loose stools are accompanied by a dehydration which, when excessive or long continued, interferes with the baby's normal gain. A long-continued depletion of water is serious, since "the fluid requirements of an infant are tremendous. A normal infant 15 pounds in weight will frequently excrete as much as one litre of urine per day. A negative water balance for more than a very short period is incompatible with life." (Brown and Tisdall)

Moreover, when the condition is superimposed by chance infection, the delicate balance may be seriously upset, since the infant's reserves have already been drawn upon, so that resistance to infection and dangerous forms of diarrhea may be too low for safety. Every physician dreads diarrhea, which Holt and McIntosh call "the commonest ailment of infants in the summer months."

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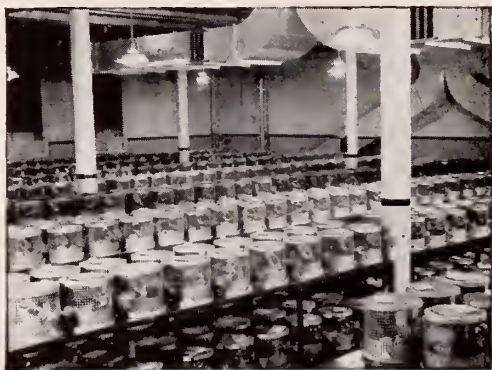
## AND THE PROBLEMS OF DIET

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Appert's findings were made empirically years before the true causes of food spoilage were known. Today, it is evident that the success of his procedure was due to heat destruction of spoilage micro-organisms, such as are associated with raw foods, and protection from subsequent contamination by such organisms.

The sterilization procedure, or the "proc-

ess" as it is termed in the industry, is an integral part of commercial canning. Essentially, it involves the heat treatment of foods sealed in hermetic containers after proper preparation; the preparatory procedures accomplishing, among other things, the removal of most of the air from the can.

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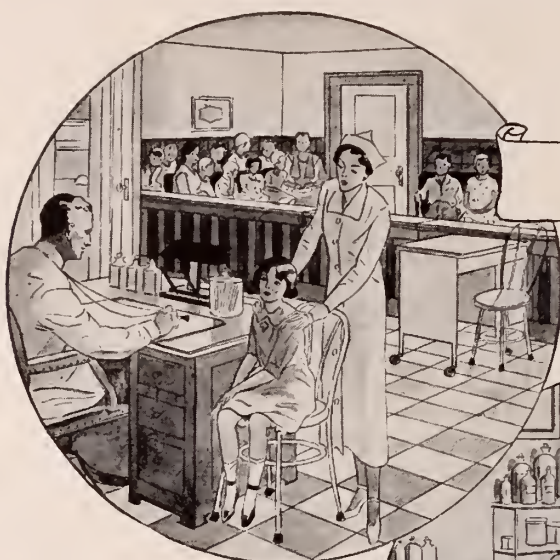
(1) The Art of Preserving, M. Appert, Black, Parry and Kingsbury, London, 1811.

(2) Thermal Process Time for Canned Foods, C. O. Ball, Natl. Res. Council Bulletin, v. 7 No. 37, 1923

(3) Preventive Medicine and Hygiene, M. J. Rosenau, Appleton-Century, N. Y. 5th Ed. 1927.

*This is the third in a series of monthly articles, which will summarize, for your convenience, the conclusions about canned foods which authorities in nutritional research have reached. We want to make this series valuable to you, and so we ask your help. Will you tell us on a post card addressed to the American Can Company, New York, N. Y., what phases of canned foods knowledge are of greatest interest to you? Your suggestions will determine the subject matter of future articles.*





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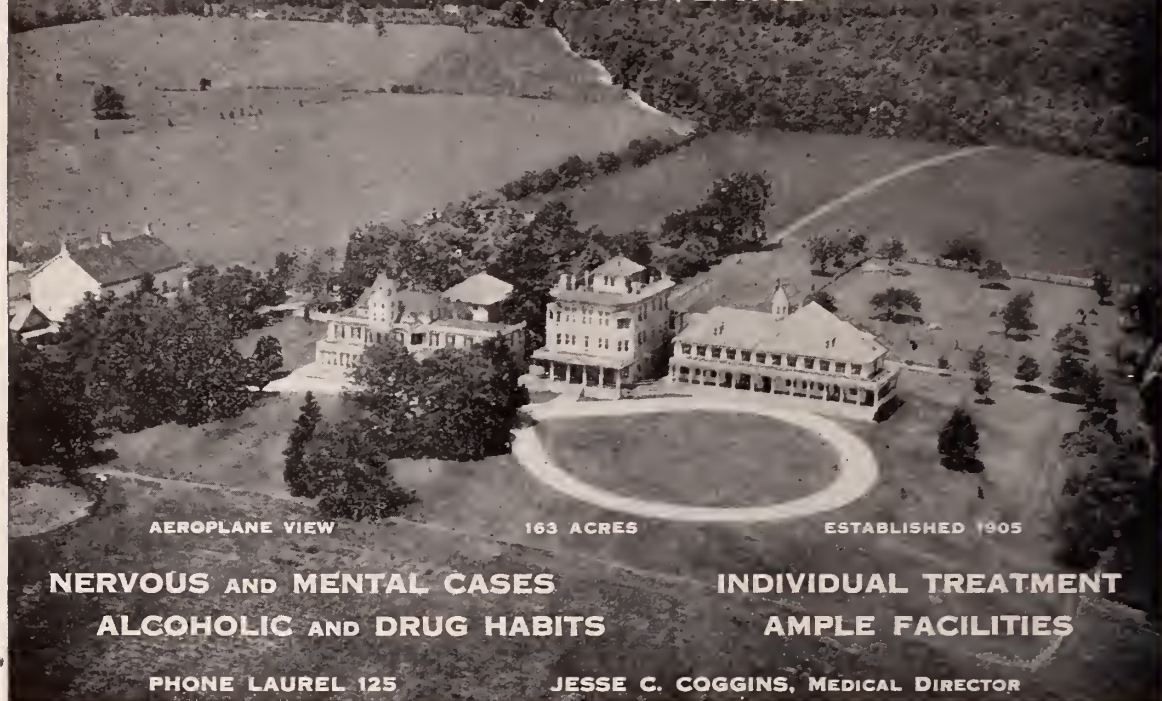
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## SHRINKAGE OF THE TURBINATES

### EFFECTED BY BENZEDRINE INHALER IN THE TREATMENT OF HAY FEVER

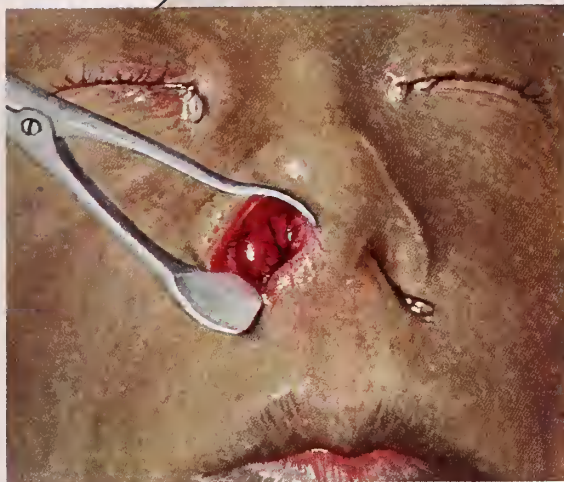


FIG. (i) 3:02 P.M. Before Treatment

CASE No. 1 (B.C.) Female. Colored. Acute hay fever. Seen at Nose and Throat Clinic of a Philadelphia hospital, May 28, 1934. The inferior turbinates were badly engorged and there was considerable lacrimation as seen in Fig. (i). Following four inhalations (two in each nostril) from Benzedrine Inhaler, the turbinates were shrunk as in Fig. (ii) and there was relief from lacrimation.



FIG. (ii) 3:07 P.M. After using Benzedrine Inhaler

These pictures were made by William B. McNett from actual cases seen at the Nose and Throat Clinic of a large Philadelphia hospital. They illustrate strikingly the beneficial effects obtained by inhalation from Benzedrine Inhaler during an acute attack of Hay Fever. They also confirm previous publications as to the value of Benzedrine in this condition.

"The vasomotor and 'hay fever' group was like-

wise benefited." *Bertolet, Medical Journal & Record, July 20, 1932.*

... results in hay fever "were definitely encouraging. There was definite proof, in this type of case, that the amount of secretion was diminished, the subjective itching and feeling of fullness relieved and decongestion of the mucous membrane accomplished." *Byrne, New England Journal of Medicine, Nov. 23, 1933.*



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FIG. (i) 2:20 P.M. *Before Treatment*



FIG. (ii) 2:35 P.M. *After using Benzedrine Inhaler*

CASE No. 2. (M.S.) Female. White. Acute hay fever. Seen May 28, 1934 at the Nose and Throat Clinic of a Philadelphia hospital. 2:20 P.M.—Turbinates dry and engorged. Two inhalations from Benzedrine Inhaler. 2:22 P.M.—Turbinates moist and dripping—some shrinkage. 2:35 P.M.—Maximum shrinkage and complete symptomatic relief. Small spur visible on turbinate.

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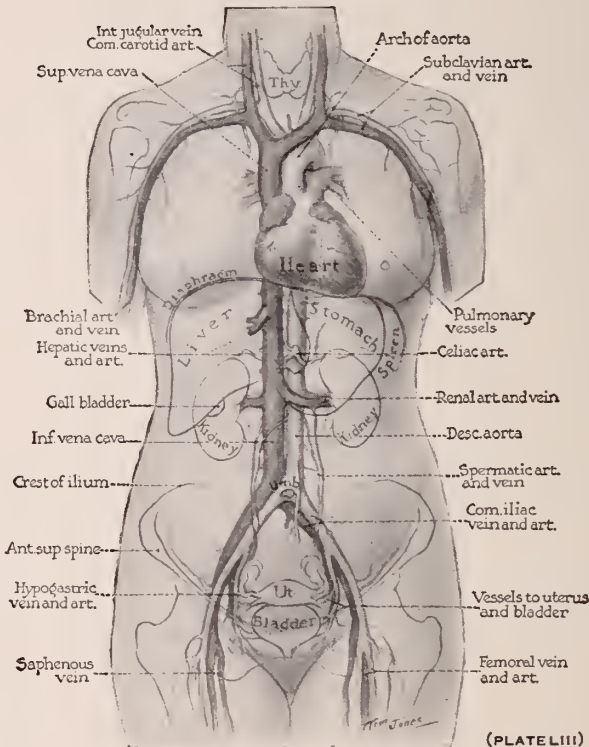


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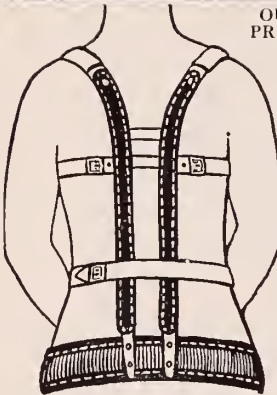
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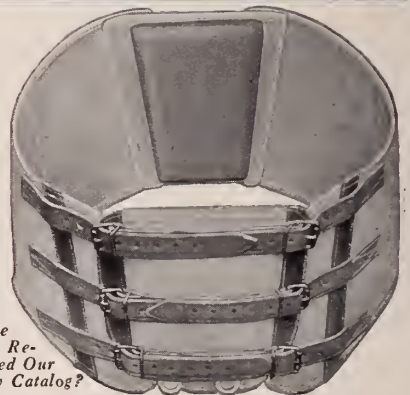
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# DELAWARE STATE MEDICAL JOURNAL

*Owned and Published by the Medical Society of Delaware  
Issued Monthly Under the Supervision of the Publication Committee*

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Number 8

AUGUST, 1935

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Per Copy 20c

## DELAWARE IN FIGURES

ARTHUR C. JOST, M. D.\*

Dover, Del.

Vital statistics, we are told, is the book-keeping of life and death. And so it is, but only within limits, since, if the impression conveyed by the statement is that in respect of any community or place a health balance sheet may be prepared comparable to that of any business organization which records its monetary transactions meticulously, one is due for many disappointments. It is true that there are certain well-known indices which are often used in the endeavor to measure the success or the reverse which a community has met in its efforts at health improvement. The general death rate, the infant mortality rate, and the tuberculosis death rate are perhaps the ones most universally accepted as indicative of the standing of any community in the health scale. But the general death rate depends to a very great extent on the age composition of the community; the infant mortality rate is accurate only if registration is accurate, and the tuberculosis death rate may be swollen to excessive figures for the very reason that the community has enjoyed the reputation of being a place where pulmonary diseases can be treated to best advantages.

Moreover, the fleeting nature of the product, life, which a vital statistics department attempts to record or trace differs vastly from that which is the medium through which a business organization functions. Our bank vaults are said even now to contain gold mined when history was young, but the tabulations of the vital statistician must record incidents respecting those who under no circumstances can long remain members of the society of which he or she is for a time a part.

So the vital statistician is a bookkeeper only within limitations which may make experimentation on a living being different from the experimentation on dead matter in a test tube.

If the above is true of any one community it can be understood that when several communities are compared or examined as to the relation there might be between their statistical records, difficulties—often insurmountable difficulties—may be immediately met. Here at once and assuredly comparisons may be odious. There are vast differences in the conditions under which statistics are gathered. There may be active disagreement in respect of the definitions of terms. Diseases rampant and deadly in one locality may be relatively mild and innocuous in another, so, before any conclusions are arrived at, much should be known and appreciated respecting the conditions affecting the localities to be compared. Only then are any conclusions of value, and only then should any dogmatic statement be made.

With this introduction an examination may be made of the vital statistics of the state in an endeavor to ascertain the value of the public health work which has for some years been carried on. That there is a connection between the work done—especially the preventive work—and the standing obtained seems definitely and affirmatively arguable. The proof appears quite positive, for example, that, had not our children been immunized as largely as they have been against diphtheria, our losses from that disease would have been higher. Had there not been carried on a very active campaign intended to result in the provision of more beds for the tuberculous and for the early recognition of cases of the disease it seems reasonable to assume that more of our population might have

\*Executive Secretary, Delaware State Board of Health.



died from tuberculosis. Had there not been initiated very active measures intended to make safe our potable water supplies and to remove the possibility of human consumption of milk and other foods capable of encouraging or actually causing disease, it is reasonable to assume that diarrheas and other dirt diseases, especially typhoid fever, would not have so lessened in frequency. Undoubtedly there must be some improvements which, as it were, came as by-products of far-reaching social or community changes, so that by no means can it be said in respect of all that planned and considered action must be given credit. But he is a courageous individual who would predicate that there has been no connection between effort and result.

The published reports of the Census Bureau of the United States furnish the information on which most of the figures given herewith are based. There is not available from that source, however, complete figures for the year 1934, so it is necessary to use figures published for the year 1933. If 1934 figures are used they have been taken from local sources. The tabulations available give the figures for all the states of the Union, sorted out and classified in accordance with the same procedure (though the original methods of collection may have differed vastly) and are probably much more acceptable for the study than would be the figures obtained from the individual states themselves.

One statement can immediately be made, that in respect of certain groups of diseases the death losses in the state of Delaware rather closely approximate the rates of loss of the Registration Area as a whole, while in respect of others the Delaware death losses are very definitely higher. All rates given are per 100,000 of population.

| DEATH RATES 1933             |          |                 |
|------------------------------|----------|-----------------|
|                              | Delaware | U. S. Reg. Area |
| Typhoid Fever .....          | 3.7      | 3.5             |
| Diphtheria .....             | 2.9      | 3.9             |
| Scarlet Fever .....          | .8       | 2.0             |
| Measles .....                | .4       | 2.2             |
| Whooping Cough .....         | 2.5      | 3.6             |
| Tuberculosis (all forms) ... | 74.7     | 59.5            |
| Polionyelitis .....          | .4       | .6              |
| Cerebro Spinal Meningitis..  | 1.2      | 1.2             |
| Influenza .....              | 17.0     | 26.4            |
| Tetanus .....                | .4       | 1.0             |

With the exception of tuberculosis, the showing is very fair; and, with but two ex-

ceptions in the entire list, the losses in Delaware are under those which were experienced in the United States as a whole. It might be said that if the figures are taken as they are prepared locally, the showing of the state is even better than here appears.

TYPHOID FEVER

Over a period of years the improvement in Delaware has closely approximated the improvement observed in the United States as a whole.

| Year | Delaware<br>(Delaware<br>Figures) | U. S. Reg. Area<br>(Census Bureau<br>Figures) |
|------|-----------------------------------|-----------------------------------------------|
| 1925 | 10.4                              | 8.0                                           |
| 1926 | 6.0                               | 6.5                                           |
| 1927 | 4.3                               | 5.5                                           |
| 1928 | 8.0                               | 4.9                                           |
| 1929 | 2.1                               | 4.2                                           |
| 1930 | 7.6                               | 4.8                                           |
| 1931 | 4.6                               | 4.5                                           |
| 1932 | 1.2                               | 3.6                                           |
| 1933 | 3.3                               | 3.5                                           |

TUBERCULOSIS

All Forms

There has been very much improvement indeed in respect of this disease during the past twenty or more years. It is but to be expected that the regularity of improvement which the larger unit shows is not likely to be duplicated in the smaller one, though the trend of improvement is actually greater in Delaware. As before, the Delaware figures are taken from Delaware sources. Where it is possible to give the figures for the white portion of our population alone, these are given.

| Year | Delaware    |                   | U. S. Reg. Area   |
|------|-------------|-------------------|-------------------|
|      | Whites only | White and Colored | White and Colored |
| 1910 |             | 184               | 160               |
| 1911 |             | 171               | 159               |
| 1912 |             | 159               | 150               |
| 1913 |             | 168               | 148               |
| 1914 |             | 183               | 147               |
| 1915 |             | 195               | 146               |
| 1916 |             | 200               | 142               |
| 1917 |             | 181               | 147               |
| 1918 |             | 183               | 150               |
| 1919 | 125         | 161               | 126               |
| 1920 | 117         | 144               | 114               |
| 1921 | 108         | 137               | 99                |
| 1922 | 85          | 118               | 96                |
| 1923 | 87          | 114               | 93                |
| 1924 | 88          | 116               | 90                |
| 1925 | 74          | 104               | 87                |
| 1926 | 85          | 109               | 87                |
| 1927 | 70          | 96                | 81                |
| 1928 | 64          | 82                | 79                |
| 1929 | 66          | 82                | 76                |
| 1930 | 50          | 69                | 72                |
| 1931 | 65          | 87                | 68                |
| 1932 | 61          | 71                | 63                |
| 1933 | 55          | 73                | 60                |

In view of the very high rate of loss among the colored, being from three to six times that of the whites, a comparison of the rate of Delaware, having about fourteen per cent of colored population, with the Registration Area population in which are fewer than ten per cent of colored, can only be made to the disadvantage of the state.

#### DIPHTHERIA

The rates of loss over a period of years are as given below:

| Year | Delaware | U. S. Reg. Area |
|------|----------|-----------------|
| 1920 | 12.5     | 15.3            |
| 1921 | 5.8      | 17.6            |
| 1922 | 8.4      | 14.6            |
| 1923 | 12.3     | 12.             |
| 1924 | 9.6      | 9.3             |
| 1925 | 13.0     | 7.8             |
| 1926 | 6.5      | 7.5             |
| 1927 | 5.6      | 7.8             |
| 1928 | 3.8      | 7.2             |
| 1929 | 5.9      | 6.6             |
| 1930 | 8.4      | 4.9             |
| 1931 | 7.1      | 4.8             |
| 1932 | 5.0      | 4.5             |
| 1933 | 2.9      | 3.9             |
| 1934 | 1.7      |                 |

The series is too short to show what is described as a periodicity, with about six or seven years between peaks, in the figures of the smaller unit. In the larger unit, composed as it is of a large number of states in which local periodicities may overlap, the tendency towards periodicity, if indeed it exists, is entirely obscured.

#### INFANT MORTALITY

In respect of the rate of infant losses the passing years have brought many well-marked changes. It should be remembered in connection with these that accuracy of birth reporting is of very great importance. Moreover, due to the large percentage of colored population, the entire southeastern portion of the United States has never been able to show rates as favorable as have other geographical divisions of the Registration Area. Of recent years, Delaware's position has greatly improved. It is doubtful if any state of the Union can show greater improvement during the past ten years than can this state. Even as late as 1930, the Delaware rate was one of the very highest ones of all the states. In 1933 there were eighteen states with higher rates and the same relative position was held in 1934. It is now within measurable distance of being the same as the rate for the entire

area. In the latter year, New Mexico, Arizona, South Carolina, Georgia, North Carolina, Tennessee, Virginia, Colorado, Maine, Maryland, Louisiana, Florida, West Virginia, Mississippi, District of Columbia, Alabama, Kentucky and Missouri all had rates higher than was Delaware's.

These are the favorable conditions. The unfavorable ones may be more briefly summed up in the statement that the crude or uncorrected general death rate of the state is one of the highest of all the states of which the Area is composed. In the year 1933 it was exceeded only by the rates experienced in the District of Columbia, Maine, New Hampshire, and New Mexico.

#### OTHER DISEASES

The rates of loss from lobar pneumonia and chronic nephritis were the highest of all the states composing the Area. Only two states, Maine and New Hampshire, had higher losses from cerebral hemorrhage. Only two, the District of Columbia and New Hampshire, lost more from diseases of the heart. (The Delaware rate was 345 per hundred thousand, whereas the rate for the Registration Area was but 206.) Only two states, Rhode Island and New York, had greater losses from diabetes. It was the eleventh in respect of cancer losses, the states losing more from that disease than Delaware being New Hampshire, District of Columbia, Massachusetts, Maine, Rhode Island, New York, Vermont, Connecticut, Oregon and California. In losses from accidental deaths, the Delaware loss was exceeded only by the rates experienced in Nevada, Wyoming, Arizona and Montana. Delaware lost 90 per hundred thousand, whereas the Registration Area rate was but 72.

Nor can it be said that that this is but the experience of but a single year. Undoubtedly there is a trend for this condition to perpetuate itself. Undoubtedly, as improvements are being made in respect of those conditions which take toll of our population in the early age groups we are moving towards still higher rates in respect of those diseases which affect more especially those of the higher age groups. The changes can be shown most graphically if there are grouped in two

classes, "A" and "B", the diseases of the two types. The "A" diseases of this tabulation are tuberculosis, typhoid fever, diphtheria, whooping cough, measles, and diarrhea under two years, the latter being here included because of the effect which it has on the infant mortality rate. In the "B" diseases are cancer, cerebral hemorrhage, chronic nephritis, diabetes, heart disease, and accidental deaths.

"A" AND "B" DISEASES

| Year | "A"                                     |                                 | "B"                                     |                                 |
|------|-----------------------------------------|---------------------------------|-----------------------------------------|---------------------------------|
|      | Combined rate per 100,000 of population | Per cent of total yearly deaths | Combined rate per 100,000 of population | Per cent of total yearly deaths |
| 1916 | 353                                     | 20                              | 640                                     | 36                              |
| 1917 | 396                                     | 21                              | 673                                     | 37                              |
| 1918 | 390                                     | 14                              | 650                                     | 27                              |
| 1919 | 267                                     | 16                              | 593                                     | 37                              |
| 1920 | 260                                     | 18                              | 585                                     | 39                              |
| 1921 | 236                                     | 20                              | 600                                     | 44                              |
| 1922 | 205                                     | 15                              | 257                                     | 41                              |
| 1923 | 212                                     | 15                              | 625                                     | 43                              |
| 1924 | 180                                     | 13                              | 649                                     | 48                              |
| 1925 | 188                                     | 15                              | 680                                     | 49                              |
| 1926 | 182                                     | 12                              | 740                                     | 49                              |
| 1927 | 136                                     | 10                              | 704                                     | 54                              |
| 1928 | 134                                     | 9                               | 740                                     | 54                              |
| 1929 | 132                                     | 9                               | 690                                     | 51                              |
| 1930 | 125                                     | 9                               | 750                                     | 55                              |
| 1931 | 138                                     | 10                              | 736                                     | 53                              |
| 1932 | 100                                     | 7                               | 734                                     | 55                              |
| 1933 | 95                                      | 7                               | 692                                     | 50                              |

The calculated trend of the "A" disease drops from 343 to 72; that of the "B" disease rises from 654 to 688.

What amounts to another view of the same phenomenon is provided by an examination of the two sets of figures which represent the average age of the individual dying in the state (the average age at death) and the age on either side of which half the deaths take place (the median age of death). Both these figures have increased quite noticeably during recent years, as will be seen from the following tabulation.

DELAWARE

| Year | Average age at death | Median age of death |
|------|----------------------|---------------------|
| 1921 | 44.44                | 50.6                |
| 1922 | 45.91                | 53                  |
| 1923 | 44.85                | 51.6                |
| 1924 | 46.77                | 53.2                |
| 1925 | 47.66                | 54.2                |
| 1926 | 48.64                | 55.5                |
| 1927 | 50.28                | 57                  |
| 1928 | 50.66                | 57.7                |
| 1929 | 49.77                | 56                  |
| 1930 | 51.54                | 59                  |
| 1931 | 51.38                | 59                  |
| 1932 | 53.76                | 60.2                |
| 1933 | 54.9                 | 61.5                |
| 1934 | 54.9                 | 61                  |

The median age for the whites was 63.4 in 1934; for the colored only 49.7. It is interesting to know that in 1893 the average age at death was only 32.74 and that the median age was as low as 26.

WILMINGTON

The city of Wilmington has participated in these changes in common with the rest of the state. Particularly, the rate of loss of infant lives has been lowered, till according to the figures of the American Child Health Association in 1933 the Wilmington rate was below the average of 985 American cities in the Registration Area. (55 as opposed to 57.1) On the other hand, the general death rate is higher than the average rate of other cities. A table which has been prepared shows the Wilmington rates in comparison with those of the cities, Philadelphia, and Baltimore.

|      | Philadelphia       |                       | Baltimore          |                       | Wilmington         |                       |
|------|--------------------|-----------------------|--------------------|-----------------------|--------------------|-----------------------|
|      | General Death Rate | Infant Mortality Rate | General Death Rate | Infant Mortality Rate | General Death Rate | Infant Mortality Rate |
| 1929 | 13.05              | 62                    | 14.41              | 73                    | 13.5               | 75                    |
| 1930 | 12.56              | 64                    | 13.93              | 65                    | 14.4               | 71                    |
| 1931 | 12.82              | 64                    | 14.16              | 74                    | 13.9               | 70                    |
| 1932 | 12.02              | 52                    | 13.13              | 62                    | 13.0               | 62                    |
| 1933 | 12.01              | 49                    | 13.05              | 61                    | 13.9               | 55                    |

Not only are the Wilmington rates higher than those of the two cities named, but it will be seen that they are higher than the majority of the other cities of the United States which approach it in population, and that this has been the case for some years.

GENERAL DEATH RATES

U. S. CITIES COMPARABLE IN SIZE TO WILMINGTON, DELAWARE

| City        | State | Population 1930 Census | General Death Rates |      |      |      |      |
|-------------|-------|------------------------|---------------------|------|------|------|------|
|             |       |                        | 1929                | 1930 | 1931 | 1932 | 1933 |
| Waterbury   | Conn. | 99,902                 | 10.5                | 10.6 | 10.6 | 10.3 | 9.6  |
| Miami       | Fla.  | 110,637                | 9.5                 | 11.1 | 11.4 | 11.6 | 11.2 |
| Tampa       | Fla.  | 101,161                | 11.6                | 11.5 | 11.2 | 11.3 | 12.0 |
| Peoria      | Ill.  | 104,969                | 13.2                | 12.3 | 12.3 | 11.1 | 11.1 |
| Evansville  | Ind.  | 102,249                | 12.6                | 12.6 | 11.3 | 10.7 | 11.2 |
| Fort Wayne  | Ind.  | 114,946                | 11.7                | 11.0 | 10.9 | 10.1 | 10.1 |
| Gary        | Ind.  | 100,426                | 10.2                | 9.6  | 9.6  | 8.0  | 8.7  |
| South Bend  | Ind.  | 104,193                | 10.2                | 9.1  | 8.1  | 7.7  | 8.0  |
| Wichita     | Kan.  | 111,110                | 12.4                | 11.9 | 9.7  | 9.9  | 9.7  |
| Cambridge   | Mass. | 113,643                | 12.8                | 11.8 | 11.8 | 12.1 | 12.4 |
| Fall River  | Mass. | 115,274                | 13.2                | 11.5 | 11.0 | 11.4 | 13.6 |
| Lowell      | Mass. | 100,234                | 13.6                | 13.1 | 12.9 | 12.9 | 13.2 |
| Lynn        | Mass. | 102,320                | 11.3                | 10.3 | 9.3  | 10.1 | 10.1 |
| New Bedford | Mass. | 112,597                | 11.9                | 11.0 | 12.0 | 11.0 | 11.8 |
| Somerville  | Mass. | 103,908                | 9.2                 | 9.7  | 8.2  | 8.8  | 9.5  |
| Duluth      | Minn. | 101,463                | 11.8                | 11.7 | 11.2 | 11.3 | 10.5 |
| Elizabeth   | N. J. | 114,589                | 10.9                | 10.4 | 10.6 | 10.4 | 9.7  |
| Utica       | N. Y. | 101,740                | 16.6                | 14.8 | 15.0 | 14.9 | 12.4 |
| Canton      | Ohio  | 104,906                | 11.1                | 9.7  | 9.9  | 9.4  | 9.3  |
| Reading     | Pa.   | 111,171                | 11.8                | 11.1 | 11.4 | 11.9 | 11.0 |
| Knoxville   | Tenn. | 105,802                | 13.3                | 14.1 | 12.7 | 12.3 | 12.3 |
| El Paso     | Texas | 102,421                | —                   | —    | —    | 14.0 | 14.1 |
| Tacoma      | Wash. | 106,817                | 12.2                | 12.8 | 12.7 | 12.8 | 13.3 |

In a city of about 100,000 population, one point difference in the death rate means about



100 deaths per year. Thus a rate of about 14 means about 1400 deaths while one of 8 means about 800 deaths.

It is possible that some of the relatively bad showing is due to the difficulty of determining accurately the population of the city, but undoubtedly it cannot all be due to that cause. If the figure which has been chosen as representing most accurately the population estimate is lower than the number of persons actually residing in the city, the computed figure of the general death rate which has been given is incorrect, being higher than the actual figure. The number of deaths has been corrected for those whose deaths occurred in the city but whose residences were in other communities, so that error due to that cause has been prevented. It is very evident that both the city and the state are contending against conditions participated in by both communities and that these conditions have been affecting the rate quite adversely.

One of the unfavorable conditions is the age composition of the population of both, and the unusual preponderance in their populations of persons of the higher age groups who are subject to higher death rates than are persons of younger ages. The census returns of the year 1930 show this quite conclusively, and show, moreover, that the condition was more marked in that year than it was in the year 1920, when also a census was taken. In the United States as a whole in 1930 the percentage of persons aged 45 years and over was 22.8. In Delaware, the per cent was over 26. There were but 9 states which had a population distribution so unfavorable. These states included several on the Pacific Coast whose general salubrity and evenness of climate had caused them to be chosen as places of retirement by many individuals desirous of spending the remainder of their lives under conditions more pleasant than they were where their competencies had been amassed. Another group of states showing the same adverse distribution were the oldest New England States, emigration from which had sadly depleted the native-born stock and which the immigrant, seeking employment in industries other than agricultural, had passed by. Delaware is thus grouped with Maine, Massachusetts, Vermont and New Hampshire, all

of which show death rates which reflect an unfavorable population composition. A method has been devised of standardizing a death rate in order to make provision for conditions such as are here represented, there being obtained by calculation a figure less than unity if the population composition be adverse and greater than unity if a more favorable condition is present. This figure or "factor of correction" when multiplied by the crude death rate results in a figure in which unusual population composition is nullified. The factor of correction in respect of Delaware as against the population of the United States as a whole is the decimal .9.

A second unfavorable condition is the presence in the state of a high per cent of the colored. There have been years during which the number of colored deaths has exceeded the number of births, though each rate has exceeded 20 per thousand of population. If, however, the same distribution persisted in recent years as was present during the year the census was taken, the statistics of the state outside of Wilmington are adversely affected to an extent much greater than is Wilmington itself. During the census year there was in Wilmington approximately one colored person to each eight whites. In the state outside of Wilmington the proportions were about two to eleven.

#### COMMENTS

What observations are we justified in making in connection with these conditions? It would first appear that the time is approaching when more preventive work must be undertaken against the many diseases which have heretofore not been considered as coming within the field of a health department's interest. The attack on communicable disease has met with a measurable degree of success. The other group of diseases have in the interval been taking an increased toll. It is not to be expected that the same machinery of attack can suffice, nor can the same spectacular reductions be brought about. But deaths can be further postponed to an extent well worth the attempt. Particularly it should be possible to lessen the number of deaths from pneumonia. Accidental deaths alone in 1933 numbered almost as many victims as did six of the commonest communicable diseases.

Surely, something can be done to prevent these losses, especially in view of the ages of the majority of those dying. Who has yet proved to us that cancer is entirely beyond control? It is well-known how many of these cases come under observation too late for successful treatment. But could not something of very great value be achieved if it could be brought about that early application for relief were the rule rather than the exception?

This is of special importance in the state since it is deaths from this class of diseases which is doing so much towards making the Delaware general death rate so high. But all the indications are that this condition will soon affect many if not all the others, though for the present Delaware and several of the northern states most give evidence of being affected. Health departments and the medical profession, whose instruments health departments are, should prepare themselves for the change of front.

This extension of work should be undertaken both in the city of Wilmington and in the rural areas. It should not be forgotten that the facilities which a city usually can offer are such that city records should better the records of the rural portions of the state. Thus the rates of the city of New York are more favorable than are the rates of the remainder of the state, just as the rates which the city of Detroit presents are lower than are those of the remainder of Michigan. It would appear that the rate of the city of Wilmington should be more favorable than those of the remainder of Delaware. The city of Wilmington should prepare itself with such a health equipment as would make the attainment of this position possible.

# THE DIPHTHERIA CONTROL PROGRAM

C. A. SARGENT, M. D., C. P. H.\*  
Dover, Del.

The diphtheria immunization program was started in Delaware in March 1926. Since that time we have been attempting to determine the efficiency of the prophylactic inoculations. As indicated by the mortality rates, the results had not been as good as antici-

pated, until the past two years, even though a relatively large per cent of the population had been given the protective treatments. In 1930 and 1931 the mortality and morbidity rates were so high that statistical, epidemiological and laboratory studies were undertaken which have been continued up to the present time.

Diphtheria immunization clinics have been conducted in the schools of the state every year since 1926 and clinics for the immunization of pre-school children have been conducted once a week or once a month in the various health centers. The per cent of the population given the protective treatments by age groups and years is as follows:

| Year | Age   |       |       |                  |
|------|-------|-------|-------|------------------|
|      | 0-4   | 5-9   | 10-14 | 15 and over      |
| 1926 | .9%   | 12.1% | 10.1% | .2%              |
| 1927 | 3.0%  | 28.9% | 31.0% | .86%             |
| 1928 | 5.2%  | 38.6% | 49.0% | 1.4%             |
| 1929 | 6.2%  | 44.3% | 64.0% | 2.2%             |
| 1930 | 10.0% | 44.6% | 75.0% | 3.5%             |
| 1931 | 16.0% | 47.2% | 82.0% | 5.1%             |
| 1932 | 19.4% | 47.0% | 83.0% | 7.3%             |
| 1933 | 22.4% | 47.5% | 79.0% | 8.9%             |
| 1934 | 29.0% | 61.0% | 79.0% | 12.0%            |
|      |       |       |       | Total population |
|      |       |       |       | 2.4%             |
|      |       |       |       | 6.9%             |
|      |       |       |       | 10.4%            |
|      |       |       |       | 13.1%            |
|      |       |       |       | 15.4%            |
|      |       |       |       | 18.1%            |
|      |       |       |       | 20.0%            |
|      |       |       |       | 22.0%            |
|      |       |       |       | 25.0%            |

The above figures indicate only those given one complete series of preventive treatments. The total number in this group is 62,043. In addition there are 5,867 individuals who have received more than one complete series of treatments, 4,559 who have received an incomplete series followed later by a complete series and 1,363 who have received only the incomplete series of treatments.

Among the 62,043 individuals given one complete series of treatments there have been eighty-four cases of clinical diphtheria confirmed by laboratory diagnosis. This number of cases among the treated groups seems rather large, yet when the attack rates among the treated and untreated groups are considered, the attack rate of the treated group is significantly lower than that of the untreated group as may be seen in the following table:

## DIPHTHERIA ATTACK-RATE OF THE TREATED AND UNTREATED GROUPS

| (per 1,000 population) |         |             |           |         |             |
|------------------------|---------|-------------|-----------|---------|-------------|
| 1927-1928              |         |             | 1928-1929 |         |             |
| Age                    | Treated | Not Treated | Age       | Treated | Not Treated |
| 0-4                    |         | 1.78        | 0-4       |         | 1.73        |
| 5-9                    | .06     | 2.44        | 5-9       | .29     | 2.87        |

\*Director, Division of Communicable Disease Control, Delaware State Board of Health.

|           |         |             |           |         |             |
|-----------|---------|-------------|-----------|---------|-------------|
| 10-14     | .24     | .57         | 10-14     | .54     | .66         |
| 15-19     | .32     | .57         | 15-19     | .20     | .74         |
| Total     | .16     | 1.33        | Total     | .36     | 1.52        |
| 1929-1930 |         |             | 1930-1931 |         |             |
| Age       | Treated | Not Treated | Age       | Treated | Not Treated |
| 0-4       |         | 2.27        | 0-4       |         | 3.21        |
| 5-9       | .37     | 3.23        | 5-9       | .24     | 4.24        |
| 10-14     | .30     | 2.07        | 10-14     | .22     | 4.29        |
| 15-19     | .17     | .67         | 15-19     | .13     | 1.15        |
| Total     | .28     | 2.02        | Total     | .19     | 3.02        |
| 1931-1932 |         |             | 1932-1933 |         |             |
| Age       | Treated | Not Treated | Age       | Treated | Not Treated |
| 0-4       |         | 2.65        | 0-4       | .56     | 2.03        |
| 5-9       | .53     | 4.63        | 5-9       | .94     | 2.33        |
| 10-14     | .30     | 4.02        | 10-14     | .23     | 1.83        |
| 15-19     | .41     | 1.21        | 15-19     | .44     | .81         |
| Total     | .36     | 2.91        | Total     | .51     | 1.77        |
| 1933-1934 |         |             |           |         |             |
| Age       | Treated | Not Treated |           |         |             |
| 0-4       |         | .62         |           |         |             |
| 5-9       |         | .42         |           |         |             |
| 10-14     |         | .20         |           |         |             |
| 15-19     |         | .26         |           |         |             |
| Total     |         | .31         |           |         |             |

It will be noted that the attack-rate is significantly lower for all age groups of the treated population. Although immunization has not produced the results anticipated when the work was first started, it appears to be effective enough to be considered as one of the major factors in the control of diphtheria.

As immunizing agents we have used toxin-antitoxin with horse serum, toxin-antitoxin with sheep serum, toxin-antitoxin with goat serum, toxoid and alum precipitated toxoid. Attempts are being made to determine the effectiveness of the various preparations. Two very interesting facts have been presented. First: There have been no cases of diphtheria reported among those who have had more than one complete series of treatments nor among those who have had an incomplete series followed by a complete series of treatments. There have been eighty-four cases among those having had only one complete series and twenty cases among those having had only the incomplete series of treatments. Second: nine per cent of the complete treatments were of toxin-antitoxin with goat serum whereas twenty-nine per cent of the cases among those having received only one complete series of treatments were in this group.

We have been unable to determine the duration of immunity after treatment. It has

been our experience that urban children will remain Schick negative over a longer period of time than will rural children; however, our original sample has now become so small that definite conclusions cannot be drawn. We have had a few instances similar to the following which have led us to believe that too much dependence should not be placed upon one negative Schick reaction. A white boy eight years of age received the third toxin-antitoxin inoculation in January 1927. In October 1929 the Schick reaction was negative. On January 13, 1933 he developed clinical diphtheria, which diagnosis was confirmed by laboratory test. The Schick reaction may be correct at the time but, if the immunity is not of long duration, the degree of protection from time to time can only be determined by repeated Schick tests or by the determination of the antitoxin content of the blood by laboratory test. Since we do not know the duration of immunity and because there have been no cases reported among those having received more than one complete series of treatments, we have not discouraged the duplication of treatments, especially among the younger age groups. We have records of individuals who have received as many as five complete series of treatments.

Fairly accurate mortality records are available since 1910. The mortality rate has gradually been reduced since 1931 to 1.6 per 100,000 population in 1934, which is the lowest mortality rate for diphtheria of which we have any record. Diphtheria prevalence and high mortality tend to occur in cycles of about three to five years. Based upon the past records there should have been an upward trend of the rates in 1934 at least. Even granting that we may now be in the low portion of the diphtheria cycle, the length of the cycle is being extended at least. The morbidity and mortality rates for the first five months of 1935 have been the lowest for any similar period of which we have records.

We have not used alum precipitated toxoid over a long enough period of time to determine its efficiency. Of the twenty cases reported during the first five months of 1935, three had received alum precipitated toxoid in 1934. The total number given the toxoid in 1934 was 8,576. One very disagreeable fea-



ture in the use of alum precipitated toxoid has been, in our experience, the formation of abscesses. Prior to its use we had had no abscesses reported among those treated. Since using it, however, we have had approximately one abscess in each 1500 children treated.

It has been our experience that an attack of diphtheria does not always produce lasting immunity. One case may be mentioned as an illustration. A female, white woman, aged 24 years had clinical diphtheria in January 1929, and again in March 1934. The clinical diagnosis was confirmed in both instances by laboratory tests. Our series is not large enough from which to draw definite conclusions, however, there are indications that an attack of diphtheria produces more lasting immunity than the preventive treatments.

Wherein the results of immunization have not been all that was expected when the work was started, it is our opinion that immunization is the major factor in the control of diphtheria, and that good epidemiological work and immunization will do much to control the disease.

### LABORATORY COMMENTS

ROWLAND D. HERDMAN, B. S.\*

Dover, Del.

#### DIPHTHERIA

For the diagnosis or determination of the carrier state of diphtheria, Loeffler's blood-serum culture tubes, which have been inoculated with the exudate from throat or nose, are incubated at body temperature from 6 to 24 hours and are examined for diphtheria-like organisms. Those cultures showing diphtheria-like organisms are typed to determine whether they belong to the gravis, intermediate, or mitis group. All cultures for release are incubated at least 24 hours. Results when requested, are telephoned or telegraphed to the physician at his expense. Not all diphtheria-like organisms produce toxin; some are harmless. A virulence test is made on every culture showing diphtheria-like organisms.

#### PNEUMONIA

This laboratory is prepared to type pneumococci. The Krumweide and Valentine, and Neurfeld methods are used. These methods require less than 2 hours. For these tests, sputum should be submitted in a container

which does not contain a disinfectant or preservative.

#### TYPHOID AND PARATYPHOID

Blood to be examined by agglutination tests for typhoid and paratyphoid fevers should be submitted in the Keidel tube. The serum is used for agglutination tests for typhoid, paratyphoid "A" and "B", and undulant fever, and at times for typhus. The clot is cultured for typhoid and paratyphoid bacilli. During the past year we have isolated the bacilli in a large number of those specimens giving positive agglutination tests and in a few which gave negative agglutination tests.

During the first week of the patient's illness the best laboratory test is a culture of the patient's blood for typhoid and paratyphoid bacilli. When the bacilli are found the diagnosis is certain. After the first week the bacilli may be absent from the peripheral circulation. At this time the best laboratory test is the agglutination test. As the blood from patients suffering from paratyphoid fever, undulant fever, colon infection, and other febrile diseases occasionally give weak reactions with typhoid bacilli, sufficient blood should be submitted to make accurate dilutions for different examinations.

A positive reaction in dilution of 1:80 or higher, if accompanied by clinical evidence, is practically diagnostic of typhoid. Twenty per cent of all typhoid cases give positive reactions by the end of the first week, about 70 per cent by the end of the second week, and more than 90 per cent some time during the disease. A few do not give positive reactions at any time. Usually the reaction may be obtained for some time after the fever subsides.

#### UNDULANT FEVER

Undulant fever is seldom recognized clinically. The agglutination test is probably the most valuable aid in the diagnosis of the disease, as early and late cases may react too weakly to be completely dependable. When a sufficient quantity of blood is submitted for the agglutination test for typhoid, the agglutination test for undulant fever is also made. Blood for the agglutination test for undulant fever should not be collected until two weeks from the onset of the disease. It should be collected in a Keidel tube. The technic used

\*Director of the Laboratory, Delaware State Board of Health.

by this laboratory is essentially the same as that used in the National Institute of Health Laboratory in Washington.

#### TYPHUS AND SPOTTED FEVER

The agglutination test for typhus and spotted fever is known as the Weil-Felix test, and is a valuable aid in diagnosis. Two or more specimens of blood, as in typhoid, are desirable. This test depends upon the agglutination of blood serum upon certain strains of the proteus group (*Proteus* X19). This proteus—like bacillus—is found associated with typhus and spotted fever but is not the cause of the disease.

#### GONOCOCCUS COMPLEMENT FIXATION TEST

The gonococcus complement fixation test is not as sensitive as the complement fixation test for syphilis for the very simple reason that only a small amount of the antibody is produced when the disease is limited to circumscribed and superficial area in simple urethritis. Furthermore, time is required for antibody production. For these reasons the reaction is rarely positive during the first two weeks of acute urethritis of either sex, and bacteriological examination of smears and cultures constitute the best means for a laboratory diagnosis. The earliest positive reactions in acute gonorrheal urethritis of males (first attack) which Kolmer observed have been during the fourth week, and all have had prostatic urethral infections with probably early involvement of the prostate gland. He did not observe any positive reactions in mild infection presumably limited to the anterior urethra.

In chronic urethro-prostatitis of males with and without acute exacerbations, chronic cervicitis and salpingo-ovaritis of adults, chronic vaginitis, and servicitis of children, and especially in arthritis, iritis, and endocarditis, the reaction is frequently positive and of great value in diagnosis. In these bacteriological diagnosis are very frequently impossible.

In acute infections smears may be expected to disclose the presence of gonococcus in about 60 per cent of the cases. In chronic infection but 15 to 40 per cent show the organisms in

smears and cultures: the complement fixation test is therefore superior to the bacteriological examination in the diagnosis of subacute and chronic gonorrhea of women.

The gonococcus complement fixation test is of little or no value in the diagnosis of acute gonococcus infections of either sex. A negative reaction does not always exclude the disease in chronic infections. According to Kolmer the test possesses considerable practical value when properly conducted in the following conditions:

(1) In the diagnosis of acute complications of gonorrhea, and of acute exacerbations of chronic urethro-prostatitis.

(2) In the detection of latent foci of gonococcus infection in epididymis, prostate, etc. of men in the absence of discharge. A positive reaction is acceptable as evidence of residual infection which may be rendered active and infectious by many different factors.

(3) As one test for the cure of a gonococcus infection and especially of those previously yielding positive reactions. Just how much time is required for the disappearance of antibody after the eradication of infection cannot be stated and doubtless varies a great deal. Tests yielding persistently positive reactions at intervals of two months are almost surely the result of residual infections, and from 20 to 50 per cent of individuals clinically well and free of discharge may continue to yield positive reactions for varying periods of time, and some indefinitely. In this connection it must be remembered that the administration of gonococcus vaccine and antigonococcus serum may be responsible for positive reaction; but these are ordinarily eliminated within 6 or 8 weeks after the last dose.

(4) In the diagnosis of gonococcus pelvic disease of women and in differential diagnosis from inflammatory disease of other origin, tumors, etc.

(5) In the diagnosis of gonococcus arthritis, iritis, and endocarditis, in which the test is particularly valuable.



## COMMUNITY SANITATION AND DELAWARE'S OPPORTUNITY

RICHARD C. BECKETT, B. S.\*

Dover, Del.

Whatever one may think about the economics of the New Deal and of the program fostered by many men now in public life who pay very little attention to party labels, one must admit on looking over the many projects that have been consummated in the various states throughout the Union that certainly the general tone of the living conditions of hundreds of thousands of people in this country has been raised considerably. Certainly no more fundamental improvements could be made in community life than the provision for additional water supplies, and extensions as well as the installation of sewerage systems and sewage treatment plants. In addition to that, numerous communities have taken a broader view and have made Work Relief Projects of such things as swimming pools, playground areas, municipal golf courses, baseball diamonds, and others. To put it mildly, it is very unfortunate that the state of Delaware has not received its fair share of these improvements, especially when one considers that this state last year paid into the national treasury some seventeen million dollars in taxes, which undoubtedly is the highest contribution per capita made by any group of citizens in this country.

### MANY TOWNS INCOMPLETELY SEWERED

In almost every town and city in this state there are certain areas where it does not seem likely that water lines and sewer lines will be put in for some years, due to the low economic level of these people. In order to overcome the health hazards prevalent in these areas a very great impetus has been given to the movement for the construction of sanitary privies in these unsewered areas and which comes under the general term of community

sanitation. That this work is far reaching in effect can best be illustrated by stating that, at the present time, a project comprising thirty-four states has been tentatively approved by Mr. Harry Hopkins as a Work Relief Project. Under such a project, which is being fostered by the U. S. Public Health Service, the skilled and unskilled labor costs involved in the construction of sanitary privies is granted by the Federal Government as Work Relief Funds, with the cost of material being put up by the property owner.

### COMMUNITY SANITATION HAD ITS START IN THE SOUTH

The early beginnings of such work occurred long before the depression had arrived. North Carolina, under the able direction of Mr. E. H. Miller, Chief Engineer of the North Carolina State Board of Health, had started such a program in the battle against hookworm and other filth-borne diseases. The same Mr. Miller is now in charge of this work for



Type of privy in use at some of the one and two-room rural schools



Education in cleanliness can be further advanced by such improvements

\*Sanitary Engineer, Delaware State Board of Health.



the U. S. Public Health Service with offices in Washington. During the past two years, under funds supplied by the Federal government as Work Relief Projects, many states have put on extensive campaigns for the eradication of insanitary privies. I might cite that the state of West Virginia, with which I am quite familiar, has during the past 18 months constructed 61,000 sanitary privies all exactly alike, and has reduced the typhoid fever rate approximately one-third. Statistics as to the reduction in diarrhea and enteritis, as well as other filth-borne diseases, are not yet available. In Indiana, under the program sponsored by the U. S. Public Health Service, an application has been made for a sum totalling \$1,700,000 for this type of work.

#### COMMUNITY SANITATION UNDER THE C. W. A.

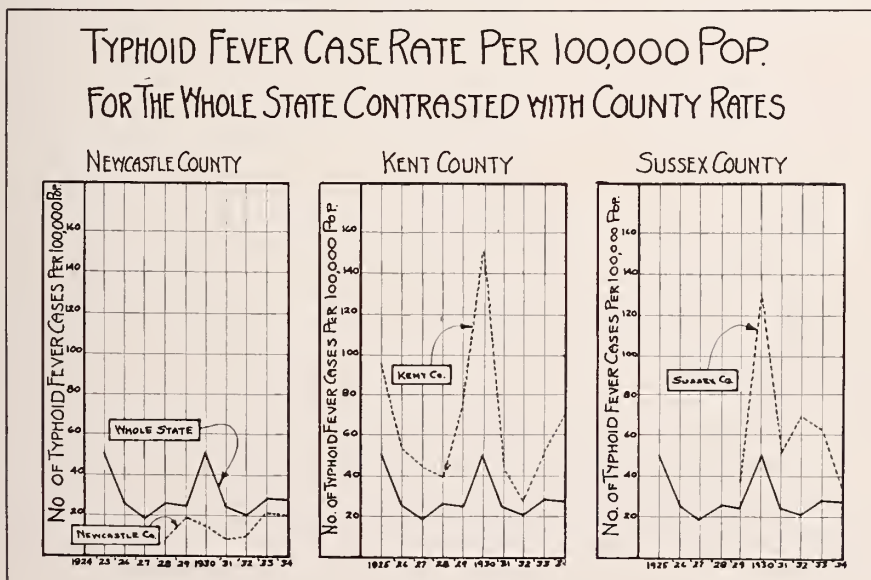
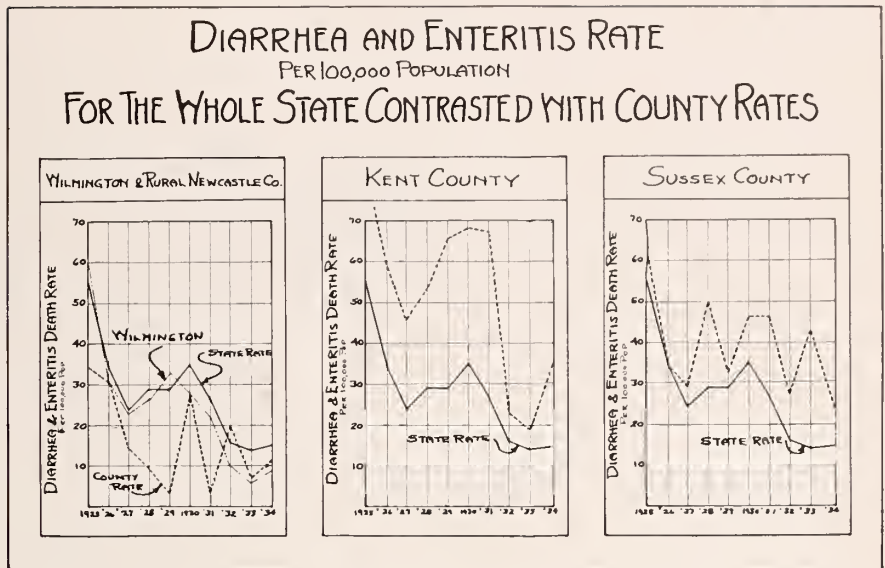
In Delaware some of this work was started in the winter of 1934, using C. W. A. funds, under the direction of Mr. Garrison, loaned to the State Board of Health by the U. S. Public Health Service. The work was started in the city of Dover and in the towns of

Smyrna, Georgetown, Millsboro and Milton. The first privy was constructed in Millsboro on February 5, 1934. Work was discontinued soon after, although a total of 132 had been completed and placed on the premises ready for use. Since that time, the State Board of Education has appropriated \$1500 for this work to provide sanitary facilities for the one and two-room schools, and just recently has appropriated another \$2500.

#### THE PRESENT PROGRAM

Lacking any setup for the securing of additional Work Relief funds, an attempt was made to interest various towns in the state to adopt a community-wide sanitation program, with the foremen in charge to have groups of

laborers and carpenters reconstruct the existing privies, using what material was available from the old structure, and with the town billing the property owner for the cost of materials and labor. Most of the towns co-operating in this program put up a small revolving fund so that the low income groups could pay for the labor and materials over a period of



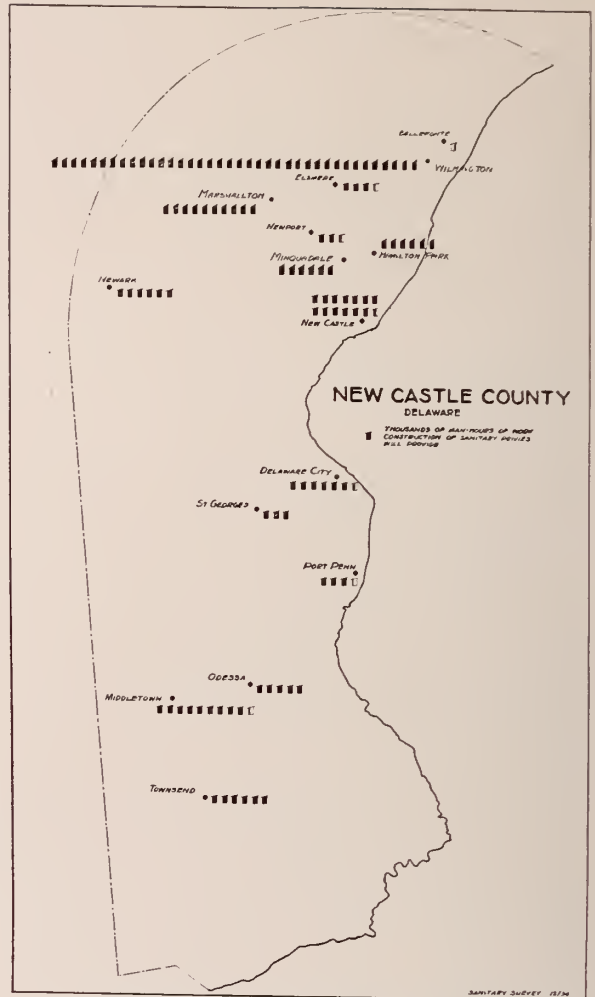
time. Under this program five towns in Sussex County, under the direction of Mr. Harry E. Tunnell, have begun this work. Millsboro by the first of September will be the first completely sanitated town in the state.

During this period sanitary surveys have been made of every incorporated town in this state, including the city of Wilmington. Maps have been prepared on which every insanitary structure has been spotted, as well as those homes that have cesspools or septic tanks. The extent of the prevalence of the insanitary type of privies is shown by the tabular form attached hereto.

In the various towns adopting this program the name of each property owner was secured and he was sent a general explanatory letter as well as a mimeographed copy showing the street layout of his town, which has spotted on it all of the insanitary structures so that the property owner would not feel that he was the only one being "picked one".

PROPOSED COMMUNITY SANITATION AND WORK  
RELIEF FOR THIS STATE

Recently the State Board of Health has submitted to the Federal Government, through Mr. Bankson T. Holcomb, W. P. A. director for the state of Delaware, a Community Sanitation Project calling for the expenditure of \$312,000, approximately one-third of this to be for labor costs and two-



Each black privy denotes 1,000 man-hours of work that could be done in each town



Maps such as these have been prepared for each incorporated town. Each black dot denotes an insanitary privy

thirds for material costs, the latter to be supplied by the property owners. If such a project is approved by the state and Federal authorities it would be possible to put to work in each county 16 carpenters and 51 laborers for a period of one year. This would enable us to sanitate practically all of the incorporated towns within the state.\*

IMPORTANCE OF THE PROPER DISPOSAL  
OF HUMAN WASTES

The importance of the proper disposal of human excreta is manifest when we know its relationship to filth-borne diseases such as typhoid fever, diarrhea, and enteritis. In addition to the filth-borne diseases, there is very good evidence that a community sanitation program carried on a state-wide basis

(\*New Castle County project approved by President August 14, 1935.)

will mean also the lowering of the pneumonia and tuberculosis rate. This presumably is due to the fact that certain body discharges associated with these diseases are also properly taken care of. This, at least, has been the experience in other areas.

With respect to the typhoid fever rates and the diarrhea and enteritis rates prevailing in the three counties the charts show very clearly that the rural areas have a considerably higher case rate than the state average which of course is undoubtedly compensated for by the city of Wilmington with its large population and sewage facilities. While the city of Wilmington has any number of insanitary privies the proportion is not as great as prevails in the smaller incorporated communities.

WHAT IS A SANITARY PRIVY

The sanitary privy as advocated by the U. S. Public Health Service, and an illustration of which is shown, consists merely of a pit in the ground four feet square and four feet deep and boarded up to prevent it from caving in, with the curbing raised somewhat above the natural ground level, with the excavated earth tamped around the outside of the curbing. The sanitary unit, which consists of the concrete floor, concrete riser, self-closing seat covers and a screened ventilator, are all placed on this mounded earth, a sill being provided for a resting place. The house itself is then bolted down to the concrete flooring through four metal prongs provided for that purpose. The contrast in the appearance of this type of privy, as compared with the common type immortalized by Chic Sales and others, is well illustrated in the accompanying photographs which show conditions as they existed at one of our one-room schools before and after improvements had been made.

The average cost of materials for a complete new structure is approximately \$22.00, with labor both skilled and unskilled averaging about \$18.00, making the total cost approximately \$40.00.

THE CASE OF SEWERS VERSUS  
SANITARY PRIVIES

The question often comes up, "Would it not be more advisable to spend this money on the construction of sewers?" The twenty-two dollars expended for materials undoubtedly would be a factor towards financ-

ing the cost of sewers; but on the other hand, many property owners do not have running water nor the necessary toilet fixtures. Furthermore, a good many towns are not interested in providing sewers for such areas. The usual statement on the part of the town authorities is that we will do this within two or three years time, but actual experiences show that in the meantime five or ten years pass and certain groups of our population grow up without decent sanitary facilities. It is for this reason that such a community sanitation program carries considerable weight with public health authorities.

INSANITARY PRIVIES IN DELAWARE  
NEW CASTLE COUNTY

| Incorporated         |            |                |
|----------------------|------------|----------------|
| Town                 | Population | No. of Privies |
| Bellefonte .....     | 761        | 9              |
| Elsmere .....        | 1,204      | 90             |
| Delaware City .....  | 1,005      | 125            |
| Middletown .....     | 1,242      | 278            |
| New Castle .....     | 4,131      | 275            |
| Newark .....         | 3,889      | 150            |
| Newport .....        | 947        | 68             |
| Odessa .....         | 373        | 75             |
| Port Penn .....      | 250        | 40             |
| St. Georges .....    | 265        | 40             |
| Townsend .....       | 421        | 70             |
| Wilmington .....     | 104,941    | 929            |
|                      | 119,439    | 2,149          |
| Unincorporated       |            |                |
| Hamilton Park ....   |            | 140            |
| Minquadale .....     |            | 137            |
| Marshallton .....    |            | 224            |
|                      |            | 501            |
| Kent County          |            |                |
| Bowers .....         | 245        | 60             |
| Camden-Wyoming ..... | 1,048      | 250            |
| Clayton .....        | 824        | 34             |
| Dover .....          | 4,773      | 305            |
| Felton .....         | 463        | 145            |
| Frederica .....      | 589        | 212            |
| Milford .....        | 3,716      | 568            |
| Smyrna .....         | 1,957      | 175            |
|                      | 13,615     | 1,749          |
| Sussex County        |            |                |
| Blades .....         | 466        | 85             |
| Bridgeville .....    | 987        | 60             |
| Delmar .....         | 838        | 85             |
| Frankford .....      | 450        | 152            |
| Georgetown .....     | 1,755      | 470            |
| Greenwood .....      | 527        | 130            |
| Laurel .....         | 2,277      | 296            |
| Lewes .....          | 1,890      | 171            |
| Millsboro .....      | 479        | 165            |
| Milton .....         | 1,130      | 116            |
| Seaford .....        | 2,468      | 388            |
| Selbyville .....     | 661        | 137            |
| Rehoboth .....       | 795        | 125            |
|                      | 14,723     | 2,380          |



## A SURVEY OF THE RESULTS OF ARTIFICIAL PNEUMOTHORACES ON ONE HUNDRED THIRTY-TWO CASES

L. D. PHILLIPS, M. D.\*

Marshallton, Del.

A brief history of the development of artificial pneumothorax for the treatment of pulmonary tuberculosis reveals that James Carson, an English physician, suggested that the most rational treatment of pulmonary tuberculosis would be the collapse of the affected lung. So convinced was he of its possibilities that in 1822 he induced two patients to submit to this operation. An incision was made in the chest wall to admit the passage of air. The usual sound heard when such an opening is made was not audible in either case and it was suspected that pleural adhesions existed which prevented collapse of the lung. Carson's practical suggestion was then forgotten for many years.

In his book of diseases of the chest, published in 1837, the keen clinical observer William Stokes, has this to say: "The proper symptoms of phthisis are in many cases arrested, and singularly modified, by the occurrence of the new disease (pneumothorax). I have often found that after the first violent symptoms had subsided, the hectic ceased, the phthisical expression disappeared, the flesh and strength returned; and in this way the patient has enjoyed many months of comfortable existence, and was only disturbed by dyspnea and the sound of fluctuation on exercise." In his book on Diseases of the Lungs, published in 1860, Walter Hayle Walshe says: "In some recorded cases of actively advancing phthisis, the first sufferings of accidental perforation having passed, it has certainly appeared, though the signs of hydro-pneumothorax remained, that the phthisical symptoms themselves underwent improvement. But an occurrence so rare gives no warranty for the fanciful proposal to treat phthisis by producing artificial pneumothorax."

This shows clearly that the method was suggested in England long before Forlanini had done it in Italy. During the course of the nineteenth century many other physicians

reported experiences similar to those of Stokes and Walshe just quoted.

It was, however, C. Forlanini, of Pavia, who first induced a pneumothorax for therapeutic purposes, and reported his experiences in 1894. Independently of Forlanini, John B. Murphy, of Chicago, did the same in 1898. But for some time no attention was paid to this method of treatment until Brauer, Spengler, and others, took it up in Germany. At present, it is one of the recognized methods of treatment of certain cases of pulmonary tuberculosis. That it is a valuable method will be appreciated when it is borne in mind that it is mostly indicated in cases in which everything else has been tried and found wanting, in other words, when there is everything to gain and nothing to lose. Contrasted with other methods of treatment, which are nearly always stated to exercise their alleged curative effects only during the minimal stage of the disease, when diagnosis is often doubtful, and spontaneous cures are not uncommon, it is to be considered one of the best therapeutic procedures we have at present for the cure of phthisis.

Maurice Fishberg in his third edition of *Pulmonary Tuberculosis* published in 1922, states: "The proportion of cases suitable for the treatment is very small indeed. Statistics of most writers seem to indicate that less than 5% of all cases that come under their observation are suitable for this treatment. Hardly 2% of the cases that came under my observation during the past ten years could be considered suitable for pneumothorax treatment."

The percentage of cases in which artificial pneumothorax is thought advisable has been increasing each year until at present in some tuberculosis centers, 75% of all patients admitted are treated by some form of surgery, the majority being artificial pneumothorax.

Statistics here at the Sanatorium show that in 1928, 5 patients, or 5.6% of 88 admissions, submitted to this operation, while in 1934, 28 patients, or 35.3% of the 77 admissions, submitted to this operation.

The success or failure of this procedure depends almost wholly on the degree of collapse of the diseased areas. There is practically always some involvement of the collateral

\*Director, Brandywine Sanatorium, Delaware State Board of Health.

lung. This involvement, if not too extensive, generally improves when the more diseased lung is put at rest; thereby arresting the positive sputum from the areas which are seeding the better lung.

The above is well borne out by the following tables:

| Year  | No. Patients |     |       | Collapse                |              |                |                     |                 |      |
|-------|--------------|-----|-------|-------------------------|--------------|----------------|---------------------|-----------------|------|
|       | New          | Old | Total | Total Number Treatments | Satisfactory | Unsatisfactory | Living—Symptom-free | Living—not well | Dead |
| 1928  | 5            | —   | 5     | 60                      | 1            | 4              | 1                   | —               | 4    |
| 1929  | 2            | 2   | 4     | 58                      | 1            | 1              | 1                   | —               | 1    |
| 1930  | 13           | 2   | 15    | 294                     | 7            | 6              | 6                   | 4               | 3    |
| 1931  | 24           | 11  | 35    | 809                     | 11           | 13             | 10                  | 4               | 10   |
| 1932  | 21           | 27  | 48    | 1086                    | 7            | 14             | 8                   | 8               | 5    |
| 1933  | 39           | 34  | 73    | 1851                    | 22           | 17             | 20                  | 11              | 8    |
| 1934  | 28           | 50  | 78    | 2499                    | 14           | 14             | 14                  | 13              | 1    |
| Total | 132          | 126 | 258   | 6657                    | 63           | 69             | 60                  | 40              | 32   |

DURATION OF TREATMENT

| COLLAPSE       | Number Patients | Less 6 mos. | 6 mos.-1 yr. |          |          |          |        |   |
|----------------|-----------------|-------------|--------------|----------|----------|----------|--------|---|
|                |                 |             | 1-2 yrs.     | 2-3 yrs. | 3-4 yrs. | 4-5 yrs. | 5 yrs. |   |
| Satisfactory   | 63              | 5           | 11           | 20       | 8        | 8        | 5      | 6 |
| Unsatisfactory | 69              | 50          | 5            | 6        | 3        | 3        | 1      | 1 |
| Total          | 132             | 55          | 16           | 26       | 11       | 11       | 6      | 7 |

| COLLAPSE       | Number of Patients | Living—Symptom-free | Living—not well | Dead |
|----------------|--------------------|---------------------|-----------------|------|
|                |                    |                     |                 |      |
| Satisfactory   | 63                 | 53                  | 9               | 1    |
| Unsatisfactory | 69                 | 7                   | 31              | 31   |
| Total          | 132                | 60                  | 40              | 32   |

CLASSIFICATION OF PATIENTS ON WHOM  
ARTIFICIAL PNEUMOTHORAX HAS  
BEEN DISCONTINUED

| INACTIVE       | Number of Patients | Living—Symptom-free | Living—not well | Dead |
|----------------|--------------------|---------------------|-----------------|------|
|                |                    |                     |                 |      |
| Satisfactory   | 10                 | 8                   | 1               | 1    |
| Unsatisfactory | 64                 | 7                   | 26              | 31   |
| Total          | 74                 | 15                  | 27              | 32   |

A satisfactory collapse of the lung must meet all of the following requirements: collapse of all diseased areas, closure of all cavities, rendering of the sputum negative, general improvement of the patient.

By an unsatisfactory collapse one or more of the following conditions are present: diseased areas are not collapsed, cavities are not closed, persistent positive sputum, no general improvement of the patient.

Pleural adhesions may be present in either case. A satisfactory collapse was obtained in

spite of the adhesions, or the adhesions may have been the cause of an unsatisfactory collapse.

The patients on whom artificial pneumothoraces were attempted and no free pleural space found have also been included under unsatisfactory collapse. The reasons for the unsatisfactory collapse may thus be classified as follows: no free pleural space, an air pocket which apparently did not influence the diseased areas, adhesions holding open the diseased areas and cavities to a greater or less extent.

The patients classified under "living and symptom-free" have no elevation of temperature, no active complications, and meet the requirements of a satisfactory collapse.

The patients tabulated under "living and not well" have symptoms caused by their tuberculous infection such as loss of weight, night sweats, fever, fatigue, complications, (laryngeal, intestinal, etc.) and pulmonary findings as classified under unsatisfactory collapse.

Sixty-three patients have or have had a satisfactory collapse. Seven of these sixty-three patients have been re-expanded. Twenty-four are now working. Four of the seven patients living and symptom-free have had extrapleural thoracoplasties.

Artificial pneumothorax is employed only on those patients in whom it is felt that bed rest alone will not produce sufficient healing of the lesions, or in whom bed rest has been given a trial with no improvement. Following these principles, artificial pneumothorax has been used almost entirely on moderately advanced and far advanced cases with cavity formation. It is our conviction that if a satisfactory collapse is obtained, the patient has an excellent chance of recovery.

VACCINATION WITHOUT  
COMPULSION

ERNEST F. SMITH, M. D.\*  
Dover, Del.

For a long time the impression has prevailed that there was strenuous objection to vaccination against smallpox in Delaware. On the other hand, many requests for vaccination

\*Health Officer for Kent County, Delaware State Board of Health.

had been coming to the State Board of Health for years. It was, therefore, decided to offer vaccination in the schools to all children whose parents signed the following request slip:

"Delaware State Board of Health"  
Request For  
Small-Pox Vaccination

I request that .....  
(Name of Child)  
be given protection against small-pox by vaccination.  
Age .... Grade .... School .....  
Date .....  
.....  
(Signature of Parent or Guardian)

These request slips were left at the schools with the teacher, who gave them to the children to take home for the parents' signature. No other preliminary work was done.

The result was rather astounding. In Kent County alone, 3,384 children returned the signed request slips and were vaccinated. The school registration, exclusive of Milford, was 6,670. Milford school, because of the nearness of final examinations, and fear that reactions might interfere with them, was postponed until fall. This shows that a trifle more than 50% of the entire school population were vaccinated voluntarily at this time. We have every reason to believe that should the work be repeated during the next school year a large part of the remainder would be vaccinated.

Multiple puncture was the method used in most cases. The procedure was to wipe off the skin with cotton saturated with ether. Ether was used because it evaporated quickly and saved time. When the skin was dry, a drop of vaccine was placed on the cleansed area, a sterile needle, held at right angles between the thumb and forefinger, was placed almost parallel to the skin and 12 to 16 punctures made by downward pressure through the drop of vaccine, into the skin over an area no larger than .5 c. m. in diameter. Care was taken to go into the skin, but not through it with the point of the needle.

In the majority of cases the child was instructed to allow the sleeve to remain up until the vaccine dried. In a few cases the excess vaccine was wiped off immediately after puncture. No difference in results between the two methods was noted.

The children were given instructions not to wear any covering other than the clothing over the vaccination, and especially not to wear a tight bandage or celluloid shield. A light gauze bandage was permissible. In spite of this advice a few shields and tight dressings were in evidence on examination about one week later. In almost every case where a shield or tight dressing was worn the area of inflammation around the vaccination was greater and the crust was softer and exuded more serum. In about 500 cases (roughly 15%) the single scratch method was used with equally good results. This consisted of a single scratch not more than 1/8 inch in length being made through a drop of vaccine into, but not through the skin; consequently, blood was not drawn.

The results were as follows:

3,384 Vaccinated  
2,978 Primary takes  
280 Immune reactions  
14 Secondary takes  
52 Failed to take

Sixty children were not inspected, due to absence. Of the 3,324 children whose vaccinations were inspected, 52, or 1.56% failed to take. The 52 were revaccinated, 30 of whom were inspected and found to have takes. 22 were not inspected.

The high percentage of takes was probably due to the freshness of the vaccine. The resulting scars were small, and in most cases, will be scarcely noticeable.

The only complication reported to us was a case in which impetigo was implanted on the vaccination. There was a typical impetigo crust the size of a silver half-dollar. This child also had lesions of impetigo about the face.



# EDITORIAL

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W. EDWIN BIRD, M. D. .... EDITOR  
Du Pont Building, Wilmington, Del.

WILLIAM H. SPEER, M. D. .... Associate Editor  
917 Washington St., Wilmington, Del.

M. A. TARUMIANZ, M. D. .... Associate Editor & Bus. Mgr.  
Du Pont Building, Wilmington, Del.  
Telephone, Wilmington, 4368

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### SOCIAL SECURITY

Thoreau, commenting on English history about the year 1850, says that nothing of significance had taken place in that quarter during the two hundred years which had elapsed between that date and the revolution of 1649.

Will some American historian, scores of years in the future, select the year 1935 by reason of the Social Security legislation then obtained as a milestone in American history, comparable in significance to what was Thoreau's opinion of the English experience?

In a measure so comprehensive and a program affecting such a large portion of the lives of all American citizens, it is not to be expected that members of the medical profession can remain either unaffected or unconcerned. On the contrary, they must of

necessity be considered as deeply involved, since there are certain specific portions of the Act the working out of which will depend on co-operation between state and Federal health departments, all of which are administered by those members of the profession who have chosen public health as their particular specialty. The briefest synopsis of these public health provisions is sufficient to disclose the extent and the importance of those portions of the plan.

I. To the Public Health Service the allotment of a sum of \$8,000,000.00 is proposed for each fiscal year, commencing on July 1, 1935. This amount has been divided in order to provide for the attainment of several and distinct aims.

- A. Five per cent (\$400,000.00) is to be allocated for division equally among 48 states and 3 districts or territories for the purpose of strengthening and developing their administrative services. This amount does not have to be matched from state funds, having the status of a "flat grant".
- B. Fifty per cent (\$4,000,000.00) is to be matched on a per capita basis with the states, one-half from existing appropriations and one-half from appropriations which may in the future be obtained from state sources.
- C. Fifteen per cent (\$1,200,000.00) is to be used as an equalization fund to be distributed in accordance with the economic needs of the states.
- D. Fifteen per cent (\$1,200,000.00) is to be allotted for special health problems presenting themselves in states which can match from state funds the amount of Federal assistance.
- E. Fifteen per cent (\$1,200,000.00) is set aside for the Public Health Service for the purpose of the training of personnel.

II. To the Children's Bureau an amount totalling \$3,800,000.00 is to be allotted each year to be expended specifically for the bet-

terment of Maternal and Child Health. This amount has been divided as follows:

- A. \$20,000.00 has been allotted to each state, district or territory on a matching basis.
- B. \$1,800,000.00 is to be divided among the states in proportion to the number of live births. (On this basis and from this amount, Delaware's proportion is \$3,372.95 per year.)
- C. The balance (\$980,000.00) is to be allotted according to the financial need of the state applying for assistance, as determined by the Secretary of Labor.

It has been considered that the provision of services in rural areas or in areas of unusual economic distress should be one of the first considerations of the Bureau in the allocation of all the above funds.

III. To the same Bureau will be allotted an amount, \$2,850,000.00 for the purpose of providing care for crippled children. This is to be spent entirely on a matching basis, there being first made available to each state \$20,000.00 to be matched from state funds. The balance of the grant is to be divided, still on a matching basis, among all the states.

In the welter of discussions which have taken place in favor of or in opposition to the measure, it has developed that at least two suggestive comments can be made. The first of these is that of all the provisions of the Act those provisions outlining expenditures for definitely public health activities have elicited the least amount of adverse criticism. The second is that as never before the attempt has been made to insure that the working out of the health provisions of the Act shall be effected without a repetition of the disagreements between public health departments and practicing members of the medical profession which have marred former similar programs.

There may always be health officers too militant, and practitioners too resentful of encroachment on what they consider to be their private preserves. It should be possible to restrain the one and to mollify the other to the end that the public interest be served.

## DELAWARE AND THE TUBERCULOUS NEGRO

CONWELL BANTON, M. D.\*

Wilmington, Del.

The writer has noted with interest the increasing space given to reports and studies of the reactions of the negro to the onset and cure of tuberculosis. The health reports of the various states and clinics are devoting separate columns to this subject, and from them many conclusions are being drawn. Some years ago the Phipps Institute made a survey of Philadelphia's negro population and this effort was followed by similar surveys in other localities. In the absence of such a survey in Delaware, a true and scientific deduction is out of the question, but the writer feels that it might not be amiss to acquaint the public with the manner in which the state of Delaware has handled this very interesting problem.

About twenty-five years ago the Delaware Anti-Tuberculosis Society established a clinic for negroes and requested a negro physician to assume charge. The attendance was large from the beginning, and showed that the negro was intensely interested in the problem as it affected him in particular. It was soon found that the main difficulty was in persuading the incipient case to accept an examination. His use of patent medicines, the advice of quacks, and the dread of the disease all had a tendency to a postponement of the necessary examination and diagnosis. It was felt that a wider education was required. To meet this need recourse was had to lectures in the various churches and schools throughout the state. These meetings were well attended without exception, and interest seemed to be aroused in the subject. Later, the National Negro Health Week was established. These "Weeks" were held annually in Wilmington for years. The writer recalls one week in which the attendance was over five hundred each night for five nights. The programs consisted of health plays, music, and a lecture by some physician whose specialty was tuberculosis. Lantern slides, moving pictures, and visiting choirs from other churches added to the program's attractiveness. As a result

\*Director, Edgewood Sanitarium, Delaware State Board of Health.

of this campaign the interest in tuberculosis grew beyond expectation. Our one clinic required two nurses, and later it was found expedient to have the clinic conducted by an entirely negro staff. This change was made by the engagement of a negro nurse, and has been found to be very successful. Because of the many demands made upon this clinic by the non-tuberculous, it was deemed wise to divide the clinic. Another negro physician was engaged, and the child health clinic was established. This particular clinic also grew out of bounds, and another physician was asked to assist in this work. The interest continued and an expansion was attempted by the establishment of a pre-natal clinic. This also has been very successful. All this has happened in Wilmington alone, as such a separation has not been found practicable in lower Delaware, because the population would not justify such separate attention. While these growths were taking form the directing forces were changed and the clinics were placed under the State Board of Health, which is now in control.

The tuberculosis clinic had not been long in existence before it was found that we had a real problem on our hands. Why tell the patient he had tuberculosis and not be able to do anything for him? Why tell the public about the danger of open cases and permit the case to remain at home? The answer was simple: the state legislature granted an appropriation and Edgewood Sanitarium was established. At first it was located in a building near "Hope Farm," now Brandywine Sanatorium. There we had one nurse, an assistant, and a cook. We had six beds, which were occupied very early after we were ready to receive patients. For a while there was some opposition in the neighborhood, but this soon vanished. After a few years in these cramped quarters we moved to the present location. At first we occupied the original farmhouse, and later the present building was erected. It was designed with the thought, so prevalent at the time, of open-air treatment. Twenty beds made up the capacity. For quite a while these satisfied the demand, but later it was found necessary to add more rooms and beds. This was done by moving the nurses' quarters out of the building into

a newly constructed nurses' home. The original farm building was converted into a home for the children. At this writing Edgewood has forty beds and each one is occupied.

Each week finds a request for beds from all parts of the state. Many times the waiting list is equal to one-half of our capacity. It is not uncommon for a minimal case to become far advanced before we are in a position to receive it. In many instances we are informed that the applicant has died before it is possible to admit him. That brings us to the crux of the situation. In order to effect a cure, the negro, more than the whites, must begin his treatment early. In the present establishment every inch of space has been used. The wards have been supplied with all the beds they can properly hold, and Edgewood needs more beds.

The present economic situation will pass and be long forgotten by all but the physician. He will have his memory sharpened by an increased incidence of tuberculosis among all races. At that time the negro will supply the greatest number of victims. Tuberculosis is largely an economic disease. The home condition of the negro is often deplorable. He lives "across the railroad" and his quarters are often mere shacks. His home is crowded beyond belief, even in Wilmington, and often without any provision for sanitary care in its most elementary form. The congested condition of his daily life is conducive to the spread of the disease and no hope can be given him for its cure under these conditions. Even in good times he is "the last hired and the first fired," and that saying is doubly true in hard times. Throughout the United States he is one-fifth of the population, but draws about one-half of the relief at the present time. His wages are lower than those paid the whites for similar occupations and his rents are higher for less habitable quarters. This lamentable situation is also true in Delaware.

The only way to fight endemic disease is to stamp it out at its source. It is our practice to kill whole herds of cattle, if found to be tuberculous. This is done at a terrific cost to all concerned. We can't do this with human tuberculosis. We must do what we can to effect a cure, but the most important feature is the prevention of spread by isolation.



This too, is costly, but not so costly as to be prohibitive. Beds must be provided for the cure, and more beds provided to prevent the spread. One open case, by spreading to others in the family or neighborhood, can easily nullify all our efforts to stamp out the disease. Yes, it is expensive, but not so expensive as to neglect to do so.

Edgewood has been provided with every modern equipment for the treatment of tuberculosis. All that can be done in its present limited space is being done. That the negro is responsive to the treatment is evidenced by the lowered death rate in the past few years. True, his rate is still higher than that of the whites, but he is rapidly gaining in his fight. He no longer has to be begged to accept a bed: he asks for one. The negro does not recover as readily as the whites, and for that reason must begin his cure early in the disease. He is learning this fact, and the state must provide facilities for the increased demand. The state has been very generous, but more beds must be provided. Our forty beds must be one hundred. That will mean more nurses and a larger staff.

We find at Edgewood that racial characteristics enter into the picture. Unless some "medicine" is given the patient he feels that he is neglected. He prefers it bitter, and it must "work" him. He is impatient of bed confinement. Many times he does better out of bed. In the main he is very cheerful, but a trifle restless under restraint. A few kind words, however, find him ready and willing to co-operate in all measures for his good. It is positively astonishing how well some of the patients do with gigantic cavities. Very often such cases are without fever at any time, and absolutely without cough or symptom: only physical examination or the x-ray disclose the true condition.

We have several patients with positive Wasserman reactions. We are particularly interested in these cases. Our experience has been that they respond very well to neoarsphenamine and the heavy metals. Our interest lies in the fact that quite often their lungs seem to clear up during the course of the antiluetic treatment. We often wonder if the luetic tuberculous does not do better than those not so afflicted. An interesting

note is sounded by the fact that we have more positive Wassermanns than at Brandywine Sanitarium, where the population is three times as large. It is our hope to prepare an article upon this feature as soon as we have had the requisite number of patients from which to draw a proper inference.

We have had but little experience with surgical tuberculosis. Our one case of thoroplasty is making a satisfactory recovery. This operation was done by the same surgeon, who has performed the many phrenic operations we have had. The success of these procedures has convinced us that with proper selection the negro will respond to such collapse measures as readily as the whites.

Our pneumothorax cases have been many, but not of sufficient number to measure our success. We have not yet permitted an expansion. We have been doing this type of collapse for about three years and in that time have had but two refusals for that treatment. We are now doing two bilaterals, and the patients seem to be making a satisfactory improvement. We have had but two accidents during this interim. In each case we had a "split diaphragm". That they were not serious is shown by the fact that we only discovered the condition upon x-ray. The patients were not aware of the condition, nor did they suffer any pain. Recovery was not retarded in any way. The accident, in each case, was probably due to a rise of the diaphragm, as a result of a former phrenic operation. Pneumothorax is very popular at Edgewood, as shown by the fact that in many instances the patient asks for it.

Our patients also have the advantage of the clinical conferences conducted by Dr. Lawrence Phillips at Brandywine Sanitarium. At these conferences our patients, among others, come up for consideration, their cases are discussed, and treatments outlined. After an interim they are reviewed and further plans made for their treatment. In this manner our patients enjoy the wisdom of several trained minds to guide them in their quest of restored health.

In reference to tuberculosis it was said at a recent symposium on hospital provision for the negro race, "there is no movement in the entire country to do anything to alleviate this

condition.' We are sure that our friends were not aware of the splendid and sustained efforts made by the Diamond State in this direction. They evidently did not know that our state conducts four clinics in Wilmington, manned by members of the negro race, that all other clinics throughout the state are open to negro patients, that the state has for over fifteen years conducted a sanatorium for the care and treatment of the tuberculous negro, and that it is conducted by an entirely negro personnel. It might be said in passing that the cost of such treatment and care is met entirely by the state.

That these attentions are appreciated is evidenced by the large attendance at these clinics, the constant request for admission to the sanatorium, and the very fine care that is taken of the equipment provided. This last phrase is worthy of amplification. Aside from its care of the patient, Edgewood is interesting to the housekeeper. It is no idle boast that Edgewood is the peer of any similar institution anywhere in its cleanliness and general sanitary upkeep. A visit to it will find it the acme of hospital hygiene.

The state of Delaware, through the State Board of Health, has accepted the challenge of the white plague. It has, through its last legislature, provided for an increase of beds at Brandywine Sanitarium, and it has established clinics at strategic points, but unless it will also provide more accommodations for its negro citizens at Edgewood the fight will be only partly won, and a partial victory is a partial defeat.

## THE PREVENTION AND CONTROL OF MEASLES

FLOYD I. HUDSON, M. D.\*  
Rehoboth, Del.

The question arises frequently as to the possibilities of prevention and control of measles. Rubella, or measles, is one of the most highly communicable of all infectious diseases. It may be classed in contagiousness with smallpox and influenza. The disease occurs in all parts of the world and in all races. It is common in the temperate zone and breaks out epidemically in the cool season of

the year in biennial or triennial periods. It spreads very rapidly in thickly populated areas and in institutions.

Measles ranks high as a cause of disease in children. Many deaths are attributed to this cause yearly. Rosenau states that ninety per cent of all deaths from measles are in children under five years of age. Ninety-five per cent of deaths from this disease are due to secondary infections settling in the lungs and causing pneumonia. It is estimated that ten thousand deaths take place yearly in the United States from measles.

The etiology of measles is not well understood. The incubation period is very definite, varying from nine to eleven days. For health purposes a figure of fourteen days is accepted as safe. A filterable virus has been demonstrated in cases of measles. This virus may be derived from the circulating blood or from the secretions of the nose and mouth, and is capable of reproducing the disease in man and monkeys. The fine bran-like scales which desquamate are not infective. The virus is very feeble and soon becomes non-infective when out of the host. It is easily killed by ordinary disinfectants and by a temperature of 131 degrees F. for 15 minutes. A streptococcus of the alpha type has also been described which is capable of producing a toxin specific to measles.

Measles is spread almost solely by droplet infection. Very small amounts of the infective material are necessary to cause an active case. Humans are very susceptible and have practically no immunity to the disease until after infection takes place. Children under one year of age have a relatively high immunity if their mothers have had measles. Infection is less likely to be transmitted after the rash appears than in the prodromal stage when the disease is not always recognized.

The control of measles is a very difficult problem because of the extreme communicability and the highly contagious prodromal stage of the disease. At the present time we have three weapons of control. They are: isolation and quarantine, general hygienic measures, passive prophylaxis with immune serum, serum globulin, or whole blood.

The value of isolation in preventing spread of the disease is not satisfactory. Chapin

\*Health Officer for Sussex County, Delaware State Board of Health.

states that isolation has been a failure in measles. In Aberdeen, Scotland, isolation reduced the measles morbidity rate seven to ten per cent. The value of isolation lies in the prevention of secondary infection in the patient. Most deaths from measles have been shown to be due to pneumonia. This means that the germs must be harbored by the patient or derived from another person with whom contact is made. Whether the secondary infecter is present in the patient or not, isolation prevents further contamination. The patient may have some immunity to organisms already present and none to those acquired from outside sources. It can be easily understood that all visitors should be prohibited from entering the room of a person sick with measles. One individual acting as nurse can carry plenty of secondary infection hazard to a patient. Isolation should be absolute. Most hospitals are unable to maintain such strict isolation because of the number of people required to handle such cases. The home is the only practical alternative. Isolation can and should be strictly maintained in the home. One individual who is immune to measles should alone be allowed to enter and leave the sick room. This procedure would cut down to a minimum the possibilities of the patient receiving any infection from extraneous sources. It should be kept in mind that secondary infection is the black sheep that maintains high mortality rates in measles. For this reason it appears that isolation at home with individual nursing care is a wise course, as far as the patient is concerned.

Karelitz and Schick have shown the following to be true after the administration of immune serum: in homes where hygienic measures were poor and where the infected individual was not strictly isolated, repeated contacts of the case were more likely to develop measles than contacts in a clean hygienic home with strict isolation. This is sufficient reason for good hygiene.

Closing schools has little or no effect on the spread of the disease. Terminal fumigation is unnecessary. A general housecleaning suffices. All soiled linens and articles should be disinfected.

The advent during the past few years of immune serum to produce passive immunity

in the exposed is very promising. If absolute protection is to be expected early administration of the serum is necessary. Recognition of the disease before the rash appears is essential for prevention and modification of the infection. Koplik spots are very helpful in early diagnosis.

In the usual course of measles a full dose of immune serum prevents the disease in an exposed person, if administered within five days after the exposure. No active immunity is produced by this procedure. From the fifth to the ninth day after exposure the administration of immune serum will greatly modify the infection, causing a mild case of measles and an active immunity in the infected individual. Immune serum given from the ninth to the thirteenth day will usually prevent the development of severe symptoms. After the disease is fully developed the serum is useless.

It appears that the degree of the disease in an exposed, susceptible person could be controlled by the administering of a full dose of immune serum at a properly chosen time. It is well to remember that a mild case of measles produces an active immunity which is relatively lasting. It is desirable to prevent the disease in children up to two years and possibly to five years of age, since the mortality rate is so high at this early age.

When convalescent serum is not available, pooled blood from healthy adults who have had measles or whole blood from parents may be used just as efficaciously.

In summarizing, the following procedures seem advisable for the best interests of the patient and the susceptible, exposed person: strict isolation of patient at home, quarantine of susceptible contacts, general cleanliness and hygienic measures, individual nursing for the patient, early diagnosis and administration of a full dose of immune serum at a proper time to prevent or modify the disease.

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### TRENCH MOUTH

JOHN R. DOWNES, M. D.\*

Newark, Del.

Vincent's angina disease is reportable in only a few states, yet there is a definite evi-

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\*Health Officer for New Castle County, Delaware State Board of Health.



dence of a widespread increase in its prevalence.

While Vincent's angina is not a disease of recent clinical or bacteriological classification—the bacteriological facts of trench mouth were worked out about the same time as were those of diphtheria, more than fifty years ago—the widespread dissemination of the disease received impetus during the demobilization of the armed forces of the United States, a great many of whom were affected with it, thus carrying the germs to all parts of the country. Another factor in the spread of the disease is increased exposure to the infection through the use of improperly cleaned eating and drinking utensils at hotels, restaurants, and especially roadside stands.

It is not the purpose of this short paper to go into the causative organism, its growth, and resemblance to organisms of other diseases; these facts and differences are well-known to every practitioner. The symptoms, course, and treatment are also well-known to him and need no comment.

The spread of the disease is a matter to which the physician as well as the health officials might to advantage give more careful thought and study, especially when it is known that a blood stream infection by the organism of angina, while rare, is very highly fatal, and is of sufficient frequency to cause all of us to want to do our part to prevent, as far as possible, its spread.

There are ample laws and regulations upon the statute books prohibiting the use of common drinking cups and poorly cleaned eating and drinking vessels; it is not more laws but better co-operation in their enforcement we need. It is embarrassing to have to admit, that due to the improper cleaning of eating and drinking utensils at many of our public places our lips come in contact and our mouths become contaminated with germs from the salivary secretions of the former patron of the roadside stand or restaurant, and if each of us will show an intelligent interest in the cleanliness of our restaurants and fountains by inquiring of the proprietor as to his method of cleaning his dishes, such a campaign on the part of the public, or even by the doctors and nurses of the state, will do

more to stop the spread of trench mouth and other nose and throat infections than all the laws and regulations the Board of Health can institute and carry out. Such safety will be furnished to the public when the public demands it, and the proper display of your interest will help to prevent trench mouth from becoming a menace of major proportions.

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### MISCELLANEOUS Reliable Apparatus

The DELAWARE STATE MEDICAL JOURNAL has received from the American Medical Association a small pamphlet containing a list of the apparatus accepted by the Council on Physical Therapy, the first one published under the direction and supervision of the Council. In addition to the list and description of accepted apparatus, the pamphlet contains indications for the use of each type and a statement relative to efficacies and dangers.

This pamphlet is a real contribution on the part of the American Medical Association in behalf of rational therapeutics, an effort to help place physical therapy on a sound, scientific basis for the benefit of the medical profession.

One of the purposes of the Council on Physical Therapy is to protect the medical profession, and thereby the public, against inefficient and possibly dangerous apparatus, and against misleading and deceptive advertising in connection with the manufacture and sale of devices for physical therapy.

"Apparatus Accepted" includes all the devices accepted by the Council prior to May, 1935. Any physician can obtain this pamphlet free by writing to the secretary, Council on Physical Therapy, A. M. A., 535 North Dearborn street, Chicago, Illinois.

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### Social Workers

Professional social workers, no less than tax collectors, have been liberally provided with employment during the past six years. Washington is overrun with short-haired women and long-haired men most of whom have been provided with jobs. These "workers" speak a strange jargon of man-hours, case-loads, indices, and like technological phrases that glorify the occupation. It is rumored with increasing frequency that professional social workers are more concerned with perpetuat-

ing their jobs than they are in seeing any lift in the depression. A commission investigating relief in New York City minced no words in a report last week charging that those who were doling out relief liked the job and didn't like the idea of having it taken away from them. We can understand the aversion of a case-worker to becoming a part of the case-load. The kindly attitude of the administration toward professional social workers has aroused the ire of thinking men and women the country over. The Government, it is said, has a larger responsibility than doling out tax dollars in direct relief and perpetuating a tremendous bureaucracy. While it is recognized that men and women must not starve, it is felt that there is little that the dole-minded relief workers have done other than temporarily ameliorate suffering and spend millions of tax dollars.

The American people, who can't be fooled all of the time, is regarding doled-out relief questioningly. It knows that millions of unemployed and underpaid Americans cannot subsist indefinitely upon public charity, and it is fast coming to the realization that a new economic order is the only alternative to increasing want. When that new economic order comes and the worker can retain all his wages, capital all its interest, and all public service will be paid for by the collection of the rental value of land, there won't be any call for professional social workers and the glib chatter of case-loads and man-hours will be forgotten.—*Labor Herald*, July 20, 1935.

### Dr. Sargent Resigns

Dr. C. A. Sargent, who for many years has held the joint position of director of communicable disease control and director of infant and maternal hygiene in the Delaware State Board of Health, will shortly leave to accept an office of equal or greater importance with the New York State Department of Health, it has been announced by Dr. A. C. Jost, executive secretary.

Dr. Sargent first became connected with Delaware public health work when he accepted a position as county health officer in 1926. Later he was given the administration of infant and maternal hygiene, and of communicable disease control. According to Dr. Jost,

much of the credit for the advances made in these two divisions belongs to Dr. Sargent.

There has been a most marked reduction in the infant mortality rate, stated Dr. Jost, and the percentage of children immunized against diphtheria is probably the highest of any State. Careful and thorough studies made by Dr. Sargent, of a number of conditions respecting the communicable diseases, have aided the progress of public health work, not only in Delaware, but elsewhere.

"In accepting the position of epidemiologist with the New York State Department of Health," concluded Dr. Jost, "Dr. Sargent carries with him to the larger field, the heartiest wishes of all his Delaware friends for similar successes in his new position."

### Why He Became Deranged

The newly-arrived patient at a mental hospital appeared exceptionally docile and quiet, so much so, that the head of the institution took him aside to ask him if he realized his position.

"My man, do you know where you are?"

"Yes, worse luck, I do; I am in your lunatic asylum for treatment."

"Tell me what happened to you?" asked the doctor.

"Tragic circumstances. I will explain; then perhaps you will understand.

"I married a widow with a grown-up daughter. Two months later my father married the daughter of my wife; consequently my wife became the mother-in-law of her father-in-law. My step-daughter became my step-mother, and my father, from then on, my son-in-law.

"A year later my step-mother had a son, who was my step-brother and the grandchild of my wife; therefore I was the grandfather of my step-brother.

"My wife now had a son who was, naturally, the brother of my father's wife, and therefore, his brother-in-law. My step-daughter is, also, the grandmother of her brother because he is the son of her step-son, as I am the step-father of my father; my son is the step-brother of my father, at the same time

the son of my grandmother, as my wife is the daughter-in-law of her daughter.

"I am the step-father of my step-mother; my father and his wife are my step-children; my father and my son are brothers and brothers-in-law. My wife is my grandmother, for she is the mother of my step-mother, and I am my own grandfather. And that," nodded the patient, "is what brought me here."

The doctor nodded understandingly, and was then taken in, for a few days' treatment, himself.—*The Tatler*.

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### Corpus Luteum Therapy

George W. Corner, Rochester, N. Y. (*JOURNAL, A. M. A.*, May 25, 1935) is aware that his discussion of corpus luteum therapy cannot immediately result in curative benefit to a single patient, nevertheless he believes that it will be profitable to consider the subject as it stands today, from the mutual standpoint of the practitioner and the investigator. Such consideration will not only explain the physiologic basis on which practical applications are to be worked out but also help, he hopes, to clear away the misconceptions and false hopes by reason of which in the past so many bottles and pill boxes have been filled with elegant but inert pharmaceuticals. Therefore he discusses the function of the corpus luteum, progesterin (the hormone of the corpus luteum favoring gestation), relaxin (another substance found in extracts of the corpus luteum, which has the property of relaxing the symphysis pubis in the guinea-pig in a manner similar to the normal relaxation which occurs in that species during pregnancy), the availability of progesterin, the clinical possibilities of corpus luteum therapy and its empirical preparations. He concludes that the American practitioner now has at his disposal no corpus luteum therapy that has passed the test of experiment, but current work with progesterin promises to give in the future a corpus luteum hormone with which the possibilities of therapy may be explored.

### Retroposition of the Transverse Colon

P. E. Truesdale, Fall River, Mass. (*Journal A. M. A.*, May 11, 1935), states that an abnormal position of the intestinal tract is the result of some disturbance of migration, rotation, descent or fixation during embryonic life. Perhaps the rarest of all developmental anomalies of the colon is retroposition of the transverse colon due to inverted rotation of the midgut during the tenth week of embryonic life. In the few cases assembled from the literature the transverse colon dips back into a tunnel behind the duodenum and superior mesenteric artery. Some constriction through torsion of the mesentery or pressure on the transverse colon then causes intestinal obstruction. The cecum and ascending colon become markedly dilated, and in some cases complicated by common mesentery the ileum is also strangulated in folds of mesentery. In the two cases cited, death was caused by cancer and tuberculosis, retroposition of the colon was discovered at necropsy. These cases of retroposition of the transverse colon are to be differentiated from cases of torsion on the peduncle of mesentery with ensuing volvulus of a segment of large intestine or, in rare instances, of the entire small intestine as well. Volvulus occurs after development is complete, as a result of torsion of the mesentery. The intestine can be restored to its normal position through detorsion anticlockwise. Several cases of volvulus result in a position of colon and small intestine almost identical with those of true retroposition. Some cases are hard to diagnose. It is apparent from end results that, when acute intestinal obstruction occurs, surgical intervention is impressive. The patient's condition, however, contraindicates radical measures, such as an anastomosis or resection, until the patient has recovered from the acute obstruction. Preliminary cecostomy can be done with less risk, and after normal evacuation of the intestine has been established further surgical measures may be undertaken to relieve constriction and correct torsion of the intestine or mesentery. In all cases treated by radical operation the prognosis is discouraging.





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# DELAWARE STATE MEDICAL JOURNAL

Official Organ of the Medical Society of Delaware

INCORPORATED 1789

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SEPTEMBER, 1935

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(1) Journal American Medical Association, 90, 459, 1573 (1928)

(2) Preventive Medicine and Hygiene, M. J. Rosenau, Appleton-Century Co., N. Y., 5th Edition

(3) Food-Borne Infections and Intoxications, F. W. Tanner, Twin City Printing Co., Champaign, Illinois

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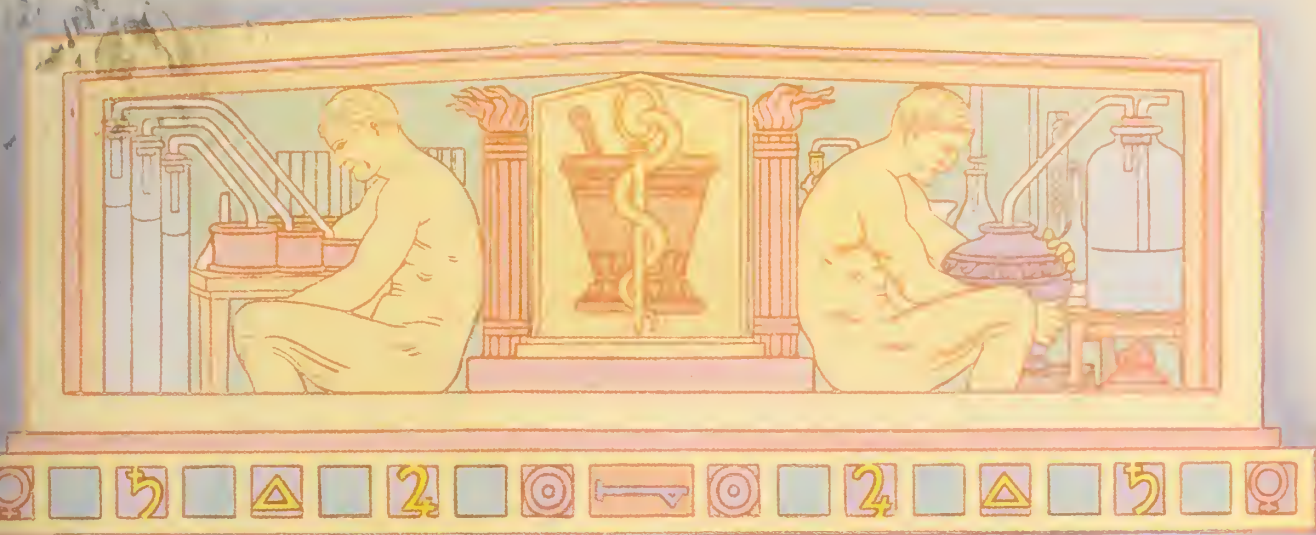
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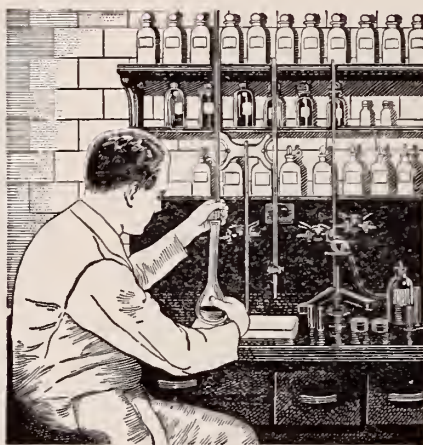
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*Owned and Published by the Medical Society of Delaware*

*Issued Monthly Under the Supervision of the Publication Committee*

Volume VII  
Number 9

SEPTEMBER, 1935

Per Year \$2.00  
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## URO-GENITAL TUBERCULOSIS\*

### A Short Review

BRICE S. VALLETT, M. D.  
Wilmington, Del.

For the purpose of description, tuberculosis of the genito-urinary system may be divided into two parts: seminal tract tuberculosis and urinary tract tuberculosis.

#### SEMINAL TRACT TUBERCULOSIS

The incidence of seminal tract tuberculosis has been estimated at .5 per cent to 5 per cent in adults. The infection (with the possible exception of the prostate gland) is always secondary to some primary focus elsewhere in the body, usually the lungs (30-40%).

The mode of infection may be through the usual channels, such as the lymphatics, the blood stream, the urinary stream, or contiguity of tissue. The disease commonly occurs in this tract between the ages of 20 and 40. It is less common in children, but the prognosis is much more unfavorable when it does occur, many of these children developing miliary tuberculosis. In an individual case the history may be negative. Some authors point out a history of trauma as first drawing the attention of the patient to a lump in the scrotum.

In the physical examination the epididymus may present an enlarged nodular painless swelling. Hydrocele of the cord is common and should not be tapped. The vas may present some nodularity or thickening at its entrance into the globus minor, or may be normal to palpation. Again, the process may simulate an acute infection: there may be heat and swelling of the overlying tissues. Suppuration occurs, and a scrotal sinus forms which does not heal. The diagnosis is

often simplified by the rectal examination, as findings here are usually positive where the epididymus is involved. The patient may have few other complaints, there may or may not be increased frequency of urination, urgency or dysuria. There may be some malaise, and the patient may not be able to put on any weight. Pyuria is usually found by the physician at this time, but is seldom noticed by the patient. Other factors in the diagnosis are the finding of the tubercle bacillus in the urine or in the prostatic secretion. It is rarely necessary and very rarely justifiable to aspirate an epididymus, as neoplasm may be present, and secondary spread may follow. Corper's potato medium for the culturing of tubercle bacilli is gaining in popularity and may in time largely supplant the guinea pig test. The x-ray may be useful in showing up calcified areas in the seminal vesicles. If there is any question of prostatic cancer, aspiration biopsy is justifiable.

The treatment of seminal tract tuberculosis is a medico-surgical problem. At the present time there are two schools of thought. One school, championed largely by Barney, may be called the conservative school. The other, strongly supported by Hugh Young, might be called the radical school.

Barney believes that the tuberculous focus begins primarily in the epididymus (being blood-borne) and that simple epididymectomy with high severance of the vas (with ligation or resection of the opposite vas) is all that is required. He claims that following this, tuberculous lesions in the seminal vesicles and prostate subside. Barney, however, had recurrence in the opposite epididymus within six months in one-fourth of his cases.

Hugh Young believes that the primary focus is in the seminal vesicle and gives an incidence of 83% of seminal vesicle tubercu-

\*Read before the Sussex County Medical Society, Georgetown, April 11, 1935.



losis in his cases. He advocates removal of both seminal vesicles and all parts of the tract showing evidences of infection. In none of his cases of radical seminal tract operation has a remaining epididymus become tuberculous. Both schools are strongly opposed to castration, as the testis is only rarely involved.

Halle and Motz say: "A detailed mass of statistics, patiently followed up on pulmonary tuberculosis on the one hand and on genito-urinary tuberculosis on the other from the earliest clinical symptoms to the ultimate issue, will furnish sufficient and certain conclusions."

Diet, heliotherapy, tuberculin, quartz light, diathermy, x-ray, alpine lamp, local treatment, and rest all have a part in treatment. Residence in a sanitarium is desirable, both pre-and post-operatively.

#### URINARY TRACT TUBERCULOSIS

Renal tuberculosis is practically always blood-borne. There are no accurate figures as to its incidence in the general population, but in tuberculous individuals it runs about 5%. To avoid confusion in the evaluation of statistics it is well to keep in mind two widely different types of tuberculosis, viz: miliary tuberculosis, and chronic caseo-cavernous or surgical tuberculosis.

When the genito-urinary tract becomes involved in pulmonary tuberculosis the prognosis is bad, one sanitarium registering 80% fatalities. This is a marked contrast to 68% arrested or cured of the total number of cases.

While the kidney is the organ most frequently affected in the urinary tract, the original infection is practically always unilateral. When the opposite kidney is involved it is usually late, leaving a period of months or years, during which time nephrectomy on the affected side will have a curative effect. Wildbolz, of Berne, Switzerland, reports but 12% bilateral renal tuberculosis in 1,000 cases of surgical renal tuberculosis. He has done about 700 nephrectomies, with 55% well at the end of ten years, some of the cases going back 20 to 25 years. This is in marked contrast to 15% well at the end of five years under medical treatment alone. In Wildbolz's cases the urinary bladder has uniformly healed in from 2 to 5 years with follow-up

treatment. Caulk has made the observation that the more acute the renal tuberculosis the quicker the bladder heals subsequent to nephrectomy. He also says that if a patient remains symptom-free for one year following nephrectomy, a permanent cure is likely.

Signs and symptoms. It is well known that the kidney is infected quite some time before it shows itself, usually through some form of bladder manifestation. Henline speaks of this as the pre-clinical stage, and says that a few leucocytes over the normal number found in the urine of an individual between the ages of 20 to 40 should direct the attention towards a possible tuberculosis focus. Tubercle bacilli in the urine may be the only finding. The three outstanding signs and symptoms are, first, increased frequency, then hematuria and dysuria. When hematuria occurs, it is often of great help in diagnosis to cystoscope the patient at the time of bleeding, as the affected side may be easily detected. When the bleeding has stopped, it may be very difficult to determine whence it came. When hematuria and frequency occur together, tuberculosis should be strongly suspected, especially if they occur out of a clear sky. In renal tuberculosis there may be localized pain in the loin; diffuse pain occurs in 30% and ureteral colic in 20%.

Edwin Beer (Jour. A. M. A., June 8, 1929), describes seven types of renal tuberculosis:

Type I—Gives the common urgency, frequency and burning at the neck of the bladder or in the urethra during micturition, and pyuria with or without microscopic or macroscopic hematuria as the outstanding symptoms. Methenamine irritates the bladder and irrigations rarely help. Many of the cases are treated as cystitis and gonorrhea.

Type II—Simulates nephrolithiasis. Pain in the kidney with attacks of bleeding. Bladder symptoms may be marked, then subside. Plain x-ray may show porous shadows which are calcified areas in a tuberculous kidney. These may be mistaken for stone shadows.

Type III—Suggests essential hematuria or neoplasm. Massive bleeding; more or less distress or colicky pains. Bladder may fill with clots and threaten exsanguination.

Type IV—No bladder signs. Pyuria alone, or occasional hematuria.

Type V—Begins as Type I, with all vesical signs and then subsides. In these patients the kidney has become excluded from the bladder by stricture formation of the ureter; the tuberculous urine can now no longer pass over the bladder surface and cause symptoms.

Type VI—Simulates sub-acute or acute pyelonephritis, and are hard to differentiate.

Type VII—Presents as perinephric sup-puration, and suspicion of tuberculosis may not be entertained until the persistent sinus demands a nephrectomy and the kidney presents all the pathologic earmarks of tuberculosis.

As long as the active disease remains unilateral and no massive hemorrhage takes place, it is surprising how well they get along, but when the disease is active bilaterally there is noticeable loss in weight, lassitude, anorexia due to toxemia, and loss of sleep from nocturia, the renal secretion is disturbed, and the patient becomes preuremic or uremic. They decline within a year or two and die of renal insufficiency, or pulmonary miliary tuberculosis.

*Diagnosis.* The diagnosis may be simple, or it may be extremely difficult. A previous history of pulmonary tuberculosis is strong presumptive evidence of renal involvement. Beer found the tubercle bacillus in the urine in 89% of his cases. Both Beer and Gilbert Thomas have devised an ingenious technic to avoid contamination of the separate renal urines.

Corper says that for the isolation and detection of small numbers of tubercle bacilli in contaminated materials the sulphuric acid crystal violet potato method has proved in comparative tests with sputum, urine and animal tissues to be equal in efficiency to the guinea pig inoculation method, and the potato culture method possesses many advantages over the guinea pig inoculation method for practical purposes, and is therefore recommended as a substitute method for diagnostic purposes, especially when acid fast bacilli cannot be found in stained smears or when it

becomes necessary in practice to differentiate the type of bacilli present.

In 1927 Braasch of the Mayo Clinic pointed out the danger of making a diagnosis of tuberculosis on guinea pig inoculation alone. While it is the most delicate of all the tests, he found 17% of negative findings in 45 proven cases of renal tuberculosis. He concludes that it is evident that renal tuberculosis may exist even though the urine obtained from the bladder and both kidneys is negative for the bacillus of tuberculosis after repeated microscopic studies and repeated guinea pig inoculation. Lowenstein observed that certain guinea pigs are immune to tuberculosis. Von Huth and Lieberthal say that guinea pigs may spontaneously develop tuberculosis. Pelouze mentions a series of guinea pig inoculations which gave 10% failures. The diagnosis may often be made by observation cystoscopy alone. Caulk says that he was able to make a diagnosis in 73% of cases by this method. It is advisable to use some sort of anaesthesia when performing it, as these bladders are extremely sensitive.

Function tests such as phenolsulphonephthalein and indigo carmine are notoriously unreliable. Braasch and Keyes have both observed that the diseased kidney may eliminate the most dye.

Chromo-ureteroscopy or the intravenous injection of indigo carmine may sometimes be of service where it may not be feasible to catheterize the ureters. Cabot and McCarthy caution against catheterization of the healthy kidney with the ureter catheter. On the other hand, Gilbert Thomas, Kretschmer, and Braasch say that they have never known the healthy kidney to become infected in this way.

Pyelography may be the only means of making a diagnosis in some cases. It may give an unmistakable picture in renal tuberculosis when all other tests are negative. It is especially valuable in detecting early lesions and, like the x-ray in chest work, is the only way of telling the regression or progression of the lesion present in the kidney.

Intravenous pyelography in some conditions is superior to the retrograde pyelogram, but can never supplant the latter. Used rou-



tinely, it would seem to have a very definite field in the early detection of renal lesions in children. It may often save the patient a painful cystoscopy, and may give valuable information where it is difficult to catheterize the ureters. Wesson and others remark that it is useful in showing up advanced lesions, but is much inferior to retrograde pyelography in early diagnosis.

*Pathogenesis.* In 1924 Medlar did some very interesting work both on animals and on the human cadaver. He proved that the old idea of excretory tuberculous bacilluria without an ulcerative lesion in the kidney is false. He also believes that unilateral tuberculosis is rare. However, he does believe in nephrectomy for ulcerative tuberculosis. Again, he believes that while a tuberculous lesion in one kidney is regressing and healing, the opposite kidney may be undergoing destruction. He believes that this fact explains the common conception of unilateral disease. He examined 44 kidneys of humans who died of pulmonary tuberculosis, and found tuberculous lesions and old scars distributed as follows:

*Scars*—Cortical, 80%; medullary, 40%; cortico-medullary, 6%.

*Tuberculosis lesions*—Cortical, 75%; medullary, 11%; cortico-medullary, 13%.

Wildbolz criticizes Medlar's work, saying that Medlar's material in studying cavernous renal tuberculosis was not appropriate to his aim, the animals being of the miliary tuberculous type and his human material cases dying of pulmonary tuberculosis, which cases often show miliary tubercles of the kidneys especially before death.

Gilbert Thomas, however, being stimulated by Medlar's painstaking work has been carrying on some admirable work in a tuberculosis sanitarium of about 750 beds in Minneapolis. His work is essentially that of detecting the potential and beginning cases of renal tuberculosis. He believes that most of the cases have bilateral lesions. No urinary symptoms were present in a majority of the patients with early lesions. Less than 25% had the severe urinary symptoms usually complained of by patients with tuberculous bladder. Some developed urinary symptoms years after posi-

tive evidence of a renal lesion was obtained. Often no x-ray evidence of tuberculosis was found in early cases. He says "I have seen some lesions grow smaller with disappearance of all urinary symptoms, and in our laboratory there are kidneys that resisted a destructive lesion of tuberculosis so completely that the lesions were entirely encapsulated. When one kidney has a non-destructive lesion, and the other kidney a destructive one, the patient should be under treatment in a sanitarium until arrest of the non-destructive lesion has occurred and until he has developed a resistance against tuberculosis."

The kidney containing the destructive lesion may then be removed. Nephrectomy is only one stage in the treatment. In every instance the patient should have the advantage of sanitarium treatment afterward until no evidence of activity of tuberculosis can be found. The article on renal tuberculosis by Von Huth and Lieberthal (*Jour. of Uro.*, August, 1933), is perhaps the best article on this subject in the past ten years and further tends to explode the old theories of excretory tuberculous bacilluria and tuberculous nephritis, the material being gleaned from 1,000 cases of renal tuberculosis in the clinic of Professor Von Illyes.

They summarize their article by saying that:

1. The normal kidney does not excrete tubercle bacilli.
2. Previously existent, sclerotic, degenerative or inflammatory lesions of the kidney do not render that organ permeable to tubercle bacilli.
3. Tubercle bacilli in the separated renal urine always come from the caseous centers of disintegrated tuberculous lesions which are in open communication with the renal pelvis. In the caseous centers of such lesions myriads of tubercle bacilli can usually be demonstrated in serial sections.
4. Tuberculous lesions in the kidney are frequently accompanied by a variety of secondary non-tuberculous, degenerative, inflammatory or sclerotic changes. Such foci have erroneously been assumed by various authors to have been produced by the direct local action of the tubercle bacillus upon the renal tissue. It has also been falsely maintained that such lesions may result in the appearance of tubercle bacilli in the urine.
5. In our opinion the inflammatory foci described by various authors as a tuberculous nephritis are secondary, non-tuberculous, inflammatory changes. The bacilluria in these cases was unquestionably caused by minute, undiscovered, ulcerative, tuberculous lesions of the kidney. Such a lesion is usually located on a renal papilla, and if it is very small, may be very easily overlooked.
6. A nephrosis may develop as a result of a pulmonary tuberculosis. The occasional appearance of



a glomerulo-nephritis in such cases is due to a secondary infection (usually streptococci) of the tuberculous pulmonary cavities. The tubercle bacillus or its toxins does not produce a nephritis.

7. In the presence of such an incipient ulcerative tuberculous lesion in the kidney, the separated renal urine may contain no pus cells, the kidney may reveal no functional defect, and the bladder may be normal on cystoscopic examination. Such early lesions may occasionally heal, and in our opinion they are responsible for the transient tuberculous bacillurias which are sometimes observed.

Nephritis has become a convenient term with which almost any pathologic process in the kidney, which cannot otherwise be easily designated or catalogued, is labelled and discarded. The presence of albumen and casts in the urine is often cited as proof of the nephritic nature of a given renal lesion. But these elements may appear in the urine in almost any renal pathologic condition in which degenerative changes have occurred in the epithelium or smaller blood vessels. This carelessness is terminology is largely responsible for the errors in the interpretation of the various lesions which have been called tuberculous nephritis.

Kidneys should be examined in the fresh condition as soon as possible after extirpation. Fixatives should not be used, as they often render it impossible to locate an incipient papillary lesion grossly. The kidney should not be opened from the cortical side, but beginning at the pelvis this is opened and every calyx carefully opened and inspected minutely with a magnifying glass.

By such careful gross examination and serial section of suspected areas in every case of 240 so studied, in which tubercle bacilli were demonstrated in the separated urine, an ulcerated caseous tuberculous focus was found in the corresponding kidney (usually a papilla). In several thousand Tiehl Neelson sections we have never found the organisms in the renal tissue, in the renal tubules or in the ordinary non-disintegrated tuberculous lesions. In every case of 1,000 cases in which tubercle bacilli had been demonstrated in the separated urines, tuberculous lesions were found in the kidney with three exceptions (all cases early in the series).

It may be said that renal tuberculosis is clinically unilateral but pathologically bilateral. In most of our cases of renal tuberculosis in which we were able to study the other apparently normal kidney at autopsy, small tuberculous foci were found on careful examination, and these were usually in the cortex.

*Treatment.* The treatment of renal tuberculosis is as in seminal tract tuberculosis, a medico-surgical problem. Young says that the operation, nephrectomy, is one of the most satisfactory in surgery. He has had a consecutive series of 111 cases without a death. Caulk has had over 100, and Wildbolz 144 without a death.

Some form of block anaesthesia, such as paravertebral or spinal, is preferable. One of the distressing complications is that of breaking down of the wound, 18% in Young's

series. Scholefield says 40% do not heal kindly. It was formerly thought that the fact of not removing the entire ureter was responsible for this, but this is now known not to be the cause, as the operation of complete ureterectomy has shown. Scholefield and Beer believe in a traumatic bacilleamia. Scholefield says "the more acute the process, the more likelihood is there of a sinus developing." The previous and post-operative histories suggest that low resistance of the patient to tuberculosis is the most important factor. It is suggested that these sinuses are not due to the continuation of any existing infection but to the development of a new tuberculous process in the traumatized tissues of a patient with lowered resistance. Therefore, improved results are more likely to come from a study of the patient's general health before and after operation than from any elaboration of operative technic. Beer has noticed, where a complete ureterectomy has been performed, that the anterior rectus sheath which is absolutely avascular, no vessel being cut or tied, never becomes infected but closes by primary union though the diseased ureteral stump is at the bottom; whereas, the posterior vascular muscle incision fails to heal kindly in about one-third of the cases.

Nephrectomy is often justifiable in bilateral renal tuberculosis. Ureterostomy or ureteral implantation may be done on the remaining kidney in selected cases. Ureterotomy on the only remaining Ureter was done on one of my cases for the correction of an intramural stricture at the ureterovesical junction. Six attempts from the bladder side had been unsuccessful. A good result was obtained. Cystostomy should not be done. Tuberculin is not a cure for renal tuberculosis, however, it cannot be dismissed as not having any value. There is evidence that it aids in building up the general health of patients with this type of tuberculosis. In the treatment of post-operative and inoperable patients it has seemed to be a helpful factor in the regime of treatment, if confined to the afebrile type. The treatment of the tuberculous bladder post-operatively is often a problem in itself. Irrigations and instillations, sandalwood oil and methylene blue

also by mouth, fulguration of chronic lesions, and ultra-violet irradiation with simultaneous ventilation of the bladder all have a field of usefulness. Young says that heliotherapy is the most important of all measures, taking precedence over rest, forced feeding, fresh air, etc. The alpine lamp is very useful. One of the latest innovations is the direct application of ultra-violet irradiation to the kidney pelvis, ureter and bladder through the cystoscope with especially contrived sounds and catheters.

In conclusion, we might reiterate that it is early detection, and adequate and long-continued treatment that gives the best results in this complication of human tuberculosis.

### **TUBERCULOSIS PREVENTION IN DELAWARE\***

JOSEPH P. WALES, M. D.  
Wilmington, Del.

Most of you will remember that I appeared before you last year with a definitely outlined program for tuberculosis testing of the children of our state.

This program had two definite objects in view: first, to stimulate your interest in the work itself; secondly, to keep the carrying out of the program absolutely in the hands of the family physician or the medical profession as far as that was possible. Only those pupils have been examined who presented a card from their parent or guardian, signed by the family physician as well. Letters were sent to physicians in each community in ample time before the testing in that community was to be done. This was done to give those physicians ample opportunity either to refer the cases back to those who were willing to do the testing, or for the family physicians to do the testing themselves.

In all, up to the present month of October, some 1586 children between the ages of about six to seventeen years have been tested. Out of that number some five hundred, or a little over 30 per cent, reacted to the skin test. Of those 500 reactors, according to our outlined program, 378 were x-rayed, and of those, 139 showed evidence of having demonstrable chest pathology. Twelve of them showed absolutely

unstable childhood lesions needing treatment.

On the whole, this is a rather gratifying indication of interest on the part of the parents of our state, and also of the doctors; but when we consider what the school population of the state of Delaware is—roughly 30,000—and if we find the same number of reactors in each group, as I think you will, indicating latent tuberculosis, and if you multiply that by the 12 active cases which I think will be in the same proportion, you can readily realize that it leaves a good deal to be desired for the future.

During the past few years we have not won out in this fight against tuberculosis; in fact, I should say that in the last two or three years we have decidedly lost ground. To effect a decrease in the mortality we must find these early cases, and we must provide accommodation for those requiring treatment. At the present time we have a waiting list of over 40 at Brandywine Sanitarium who cannot get in. Of those 40, a certain proportion will die before they are admitted into the sanitarium, and another certain proportion will probably be so far advanced that treatment will not be of the slightest avail. Hardly a day or a week passes that we don't read in startling headlines in our daily papers of some national or state disaster entailing loss of life; but we never—and it is going on silently all the time—advertise this silent toll of death caused by tuberculosis.

Our Safety Council has put up in Dover and in Wilmington, and I think elsewhere, posters showing the deaths that occur on our roads. It is not intended as a method of advertising of course, but I sometimes think we might make a dent in the mentality and possibly in the generosity of our legislators if we had some such method and advertised this silent death roll of tuberculosis. It might make them sit up and take notice that something has got to be done and done soon, if we are going to make a reduction in the death rate in this state from tuberculosis.

As you all know and have felt, we have gone through one of the worst depressions the world has ever seen. As a result of that depression, with its poorer food than that to

\*Read before the Medical Society of Delaware, Dover, October 9, 1935.

which we have been accustomed, poorer housing and poorer conditions of all sorts, we are going to face possibly an increasing death rate from tuberculosis in the next few years. So I ask each and every one of you—and I must say I am just as guilty as the rest of you are—to help meet this situation. Of the 1586 examinations one hundred per cent done by the state agency, outside of a few cases seen in private practice, and this despite the fact that you were urged to do this work so as to keep your families under your own eye. We have failed just one hundred per cent to do it.

I didn't come here to spank any or all of us on that, but I don't think it has been such a great showing. However, I ask each and every one of you to keep on encouraging this tubercular testing program. It has been very splendidly and ably done by Dr. Phillips and his assistants, but I think the private medical profession should do some of it themselves. It is not a hard test to give, and I think if you urged upon your families the doing of it it will enable us to catch these cases early and in their incipient stage, so that we can in the future have a startling decrease, I hope, in our death rate from tuberculosis.

#### DISCUSSION

DR. L. B. PHILLIPS (Brandywine Sanitarium): There are just one or two things that I want to point out that this chart shows. In the first place it shows the relation between the contact and the non-contact groups. In the contact group we found 10 per cent or 10 cases needing treatment out of 130 x-rayed, while in the non-contact group we found only 2 cases needing treatment out of 249 x-rayed. All in the contact groups were definite, we thought, contacts, while in the non-contact groups there are probably some who were contacts.

Then also there is a graph there, charted according to the graph of Delaware with other communities, which more or less coincides with what other communities find too.

Thank you!

DR. NORWOOD N. VOSS (Wilmington): I would like to say that the whole tubercular situation reminds me of Ben Hur in the chariot races. The faster the horses trot or

run the faster the floor moves under their feet. In our tubercular situation it seems to me the more effort we make to cure the disease and eradicate it, the faster the lack of food, and so on, as a result of the depression, which of course increases the incidence of tuberculosis. Of course, that was mentioned by Dr. Wales. Depression brings lots of trouble in its wake.

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### MEDICAL MAXIMS

EDWARD PODOLSKY, M. D.  
Brooklyn, N. Y.

A good prognosis is the best of tonics for a cardiac patient.—Lindsay.

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Tell a cardiac patient to find out what he can do and do it; tell him to find out what he cannot do and never do it.—Clifford Allbutt.

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Never give a definite opinion as to how long a patient suffering from pulmonary tuberculosis will live, for the only certainty is that if you do, you will be wrong.—Samuel Gee.

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If there be a calling which feels its position and its dignity to lie in abstaining from controversy and in cultivating kindly feelings with men of all opinions, it is the medical profession.—Cardinal Newman.

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Physicians, when the cause of disease is discovered, consider that the cure is discovered.—Cicero.

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In pneumonia the disease is in the lungs, but the danger is in the heart.—Lindsay.

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Pain is the prayer of a nerve for healthy blood.—Romberg.

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The nature of the body can only be understood as a whole.—Hippocrates.

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You cannot be a good doctor without pity.—Axel Munthe.

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Mystery is the fundamental curse of medicine; evasion and seecrey are criminal. The best way to help any human being is to help



him help himself. The man who is evasive in his dealings with his patient is either dishonest or ignorant, or both.—F. B. Morehead.

It is better to have a less accurate diagnosis and a more favorable prognosis.—Arthur Curtis.

The pomp and dignity of the medical art is less seen in neat and elegant formulae than in the cure of diseases.—Sydenham.

Man as an animal has to eat to live, but as an omnivorous epicure he frequently lives to eat.—Charles H. La Wall.

Treat the man who is sick, and not a Greek name.—Jacobi.

Medicine is a progressive science and knows not the meaning of stagnation. We must either advance or retreat. Hindering and hampering obstacles in the paths of advancement can result in but one thing—retreat, with its detrimental effect on the health of mankind.—C. W. Waggoner.

What is spoken of as a clinical picture is not just a photograph of a man sick in bed; it is an impressionistic painting of the patient surrounded by his home, his work, his relations, his friends, his joys, sorrows, hopes and fears.—Francis W. Peabody.

For many patients hope is the best medicine.—Lindsay.

The first qualification for a physician is hopefulness.—James Little.

Physical ills are the taxes laid upon this wretched life; some are taxed higher, and some lower, but all pay something.—Chesterfield.

We all labor against our own cure, for death is the cure of all diseases.—Sir Thomas Browne.

He who has wealth, has hope; and he who has hope, has everything.—Arabian Proverb.

It is not the disease but neglect of the remedy which generally destroys life.—Latin Proverb.

Medicine, individualistic in infancy, is by virtue of its normal development about to become social with the force of age.—E. Rist.

Knowledge makes the physician, not the fame of the school.—Parracelsus.

Truly it is better to cure diseases than to foretell their course, but this is unfortunately not always possible.—Hippocrates.

The most important therapeutic factor in medicine is therapeutic success. It is of greater moment than are all special investigations, be they ever so exact, and than all ingenious theories.—Bernard Aschner.

An important phase of medicine is the ability to appraise the literature correctly.—Hippocrates.

Where there is love of humanity, there also is love for the art of medicine.—Hippocrates.

The wisest psychology will never replace quinine and mercury in the cure of certain diseases, nor can it obviate the necessity of operative procedure for a perforated appendix.—C. F. Martin.

Nature always hangs out a little flag, which when seen and understood points to the diagnosis.—J. B. DeLee.

If a child be born well, at least two-thirds of its battle for life is won.—William Colby Cooper.

Science cannot save lives or cure disease until it is applied.—Anon.

Symptoms, with or without physical findings, need treatment. Physical findings without symptoms need to be watched.—S. E. Thompson.

In all things relating to disease, credulity

remains a permanent fact, uninfluenced by civilization or education.—Osler.

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Were it not for the poverty of the soil in defensive essences, the seeds of disease would never grow.—Leonard Williams.

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Drive away nature and back it comes at a gallop.—Proverb.

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Weariness without cause indicates disease.—Hippocrates.

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With a learned physician and an obedient patient, sickness soon disappears.—Rhazes.

### ARE YOU INCLUDED?

C. A. D'ALONZO, B. S.  
Wilmington, Del.

Millions of people are continually claiming to be getting on each other's nerves. Others are getting under each other's skin. And still others are claiming to be getting under each other's hair. Most of us realize it is really impossible to get on anybody's nerves. And you can just feature two hundred-pound Mrs. Smith under the skin of Mrs. Jones. Now wouldn't that be an enormous sight! But why all this? It seems that most of us know that we cannot get on anybody's nerves, and yet we all say it. It has often been stated that none of us are totally original. So where do these statements find their origin? With a little thought and study the statements may be traced to ancient and dust-laden ideas and theories scattered along the development of medical science.

A lot of popular phrases may be seen to originate from the science of medicine as Galen (131-201) saw it. Galen believed that the nerves were hollow tubes which contained air or "pneuma" as he called it. Essentially, a nerve fiber represents a long process of a nerve cell, the conducting mechanism of which is a long strand of protoplasm, which is produced by the cell, and which has come to be known as the axon. The axon is composed of numerous fibrillae, which are embedded in a fluid material. A layer of material known as myelin may or may not surround these

fibrillae. In accordance with the theory of Galen, if a nerve were pushed upon, as Mrs. Smith getting on it, it might be conceived that Mrs. Jones might become quite nauseated.

The origin of the statement of "getting under my skin" is somewhat more difficult to explain. However, with so many things under the skin, some may think that just anything could fit there. Now to exteriorize the subject, when we say that our nerves are "on edge" what we really may mean is that they are more external, and hence more subject to this "pneuma," or air. This is again in harmony with the galenic view of physiology. In other words when we are "on edge" we are in a more dynamic state. Thus, with hyperirritability we would get great amounts of air in those "hollow tubes." The air in this state would be under pressure, and if great enough may "shatter our nerves." Countless numbers speak of "pulsating nerves"; nerves do not pulsate. Activity may cause an increase in size, but it is the arteries which pulsate. If the nerves were hollow tubes they might be conceived of as pulsating. There is another outstanding reference in this connection. We have all at some time or other spoken of a certain person having a lot of spirit. Galen thought that this "pneuma" in the nerves was a particular kind of spirit. Therefore, those people with a superabundance of spirit are those with a big lumen in their nerves, thereby containing a lot of "pneuma," while those less fortunate individuals with a small lumen are lacking in spirit.

Another popular ancient notion was that the brain acted after the fashion of a sponge, whose function it was to keep the heart cool. Out of this one idea countless popular present-day medical phrases may be traced. Perhaps this very article is making your blood boil, but wouldn't you really be a sight with boiling blood! A human being on fire! Conceive that! Maybe the heating of the circulation is the cause of another well known fright symptom, "a lump in the throat." Here the heart seeks to get first hand aeration by attempting to get in the throat. Therefore, if your blood boils, you have hardening of the brain.

But who of us desire to be called such things as "hard-headed," "stone headed," etc.? In lieu of this, the wise of us will claim to have a soft brain. But remember that softening is a sign of degeneration. Where does that leave us? Well, at least we can say that our brain has just the proper consistency, neither too hard nor too soft. Now what initiates the pressing of this sponge? The old theory of "pneuma" in the nerves would answer this, namely, that with a strong jet of air, the brain would be squeezed. The extreme opposite of boiling blood would be freezing blood. Therefore, we speak of our blood "running cold." Here the spongy apparatus is working so efficiently it freezes the circulation. If the blood froze, the heart would have to stop beating. This would be incompatible with life. Consequently, each of us who have spoken of our blood freezing would be dead. What a thinly populated world this would be! A "cool headed" person is one whose brain and heart work in perfect harmony.

Another popular expression that we have all probably said at some time or other is that our "hearts skip beats." In reality this actually does not happen in various heart disorders. But the expression undoubtedly dates back before the seventeenth century, when Harvey discovered the circulation of the blood. The expression seems to be related to the others discussed. In amazement, emotion, or suddenness, it was possibly conceived that the spongy apparatus failed. Thus the heart which relied on the brain for cooling became excessively warm, and attempted to compensate for this by "skipping a beat."

Advancement and progress march on, but ancient influences stay with us. Few of us realize or appreciate this. We rarely stop to think of the origin of our most popular expressions. Somehow or other these phrases seem to come to us naturally. They seem to fit in better, to express the idea more adequately, in short they just seem appropriate to the occasion, to convey the thought more sufficiently. More assuredly most of us do not believe them. Just as assuredly we do not stop to even think of them. They are intrinsic phrases springing from nowhere, it may seem. We say them with a sense of original-

ity, with out a mere consideration of their evolution. But why worry? No harm is done. They are slang. They are disproven theories, notions, and concepts, which have adhered and clung to the elastic mind of man. The impression they create is deep, the significance of their presence is interesting. At times it seems as if they relate a feeling better than any other description could seem to do it. The expression seemingly fits the occasion, even though the statement is fallible. So we will continue to use them. Only as time goes let us hope to improve in our appreciation of their untruthfulness. So millions of people will continue to get in the nerves of millions of other people, as heart after heart skips beats.

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### Radio Broadcasts

The American Medical Association will broadcast over the Blue network of the National Broadcasting Company at 5 p. m. eastern standard time (4 o'clock central standard time, 3 o'clock mountain time) October 1 and each Tuesday thereafter, presenting a dramatized program with incidental music under the general theme of "Medical Emergencies and How They Are Met." The title of the program will be Your Health. The program will be recognizable by a musical salutation through which the voice of the announcer will offer a toast: "Ladies and Gentlemen, Your Health!" The theme of the program will be repeated each week in the opening announcement, which informs the listener that the same medical knowledge and the same doctors that are mobilized for the meeting of grave medical emergencies are available in every community, day and night, for the promotion of the health of the people. Each program will include a brief talk dealing with the central theme of the individual broadcast.

The October schedule is as follows:

- |             |                                                |
|-------------|------------------------------------------------|
| October 1.  | Burns, Morris Fishbein, M.D.                   |
| October 8.  | Hazards from Foreign Shores, W. W. Bauer, M.D. |
| October 15. | Unconsciousness, Morris Fishbein, M.D.         |
| October 22. | Asphyxiation, W. W. Bauer, M.D.                |
| October 29. | To be announced.                               |

—J. A. M. A., Aug. 31, 1935.



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JOHN W. DERRICKSON, Frederica, Oct. 4, 1934

WILLIAM P. O'READY, Claymont, Oct. 9, 1934

THOMAS N. MILLIKIN, Wilmington,

Nov. 24, 1934

JOSEPH M. MARTIN, Lewes, March 30, 1935

**GENERAL INFORMATION****BY-LAWS****Article III**

SECTION 1. The Society shall hold an Annual Session, during which there shall be held daily General Meetings, which shall be open to all registered members and guests. This Session shall be held at such time and place as has been fixed at the preceding session by the House of Delegates.

**Article X**

SECTION 1. No address or paper before this Society, except those of the President, invited guests, and orators, shall occupy more than twenty minutes in its delivery; and no member shall speak longer than five minutes, nor more than once on any subject except by unanimous consent.

SECTION 1. All papers read before this Society shall be typewritten, double spaced, with wide margins. Carbon copies will not be accepted.

SECTION 3. All papers read before this Society shall become its property. Each paper shall be deposited with the Secretary immediately after reading.

SECTION 4. The deliberations of this Society shall be governed by parliamentary usage as contained in the latest edition of Roberts' Rules of Order, when not in conflict with these By-Laws.

SECTION 5. The Principles of Medical Ethics of the American Medical Association, as contained in the latest edition, shall govern the conduct of members in their relations to each other, to this Society, and to the public.

*Essayists will please remember that all papers presented before the Society become the property of the Society and therefore are not to be published or submitted for publication elsewhere than in the DELAWARE STATE MEDICAL JOURNAL.*

**MONDAY, OCTOBER 7TH, 1935  
MEETING OF THE HOUSE OF  
DELEGATES**

**Delaware Academy of Medicine  
8:30 P. M.**

1. Call to order.
2. Roll Call.
3. Reading of Minutes of Last Session.
4. Appointment of Committee on Nominations.
5. Reports of Officers.
  - a. President.
  - b. Secretary.
  - c. Treasurer.
  - d. Councilors.
6. Reports of Standing Committees.
  - a. Scientific Work.
  - b. Public Policy and Legislation.

- c. Publication.
  - d. Medical Education.
  - e. Hospitals.
  - f. Neurology.
- Reports of Special Committees.

- a. Woman's Auxiliary.
  - b. Cancer.
  - c. Syphilis.
  - d. Tuberculosis.
  - e. Medical Economics.
  - f. Criminologic Institutes.
7. Report of Delegate to the American Medical Association.
  8. Unfinished Business.
  9. New Business.
    - a. Resolutions.
    - b. Communications.
    - c. Appropriations.
    - d. Approval of Scientific Program.
    - e. Selection of Meeting Place.
    - f. Miscellaneous.
  10. Adjournment.

**TUESDAY, OCTOBER 8TH, 1935  
GENERAL SESSION  
Delaware Academy of Medicine  
9 A. M.**

- 9:00 A. M.—Invocation.  
**Rt. Rev. Philip Cook, Bishop of Delaware.**  
 9:10—Address of Welcome.  
**Hon. C. Douglass Buck, Governor of Delaware.**  
 9:25—President's Address: Medical Ethics, Then and Now.  
**Jerome D. Niles, M. D., Townsend.**  
 10:00—Report of House of Delegates.  
**Scientific Papers**  
 10:30—Urology and the Child. (Presentation of Cases—Lantern Slides).  
**Brice S. Vallett, M. D., Wilmington.**  
 11:00—Infections of the Upper Urinary Tract.  
**Joseph C. Birdsall, M. D., Philadelphia.**  
 11:45—Some Angles of Acute Otitis Media.  
**Charles P. White, M. D., Wilmington.**

**LUNCHEON  
By the  
NEW CASTLE COUNTY MEDICAL  
SOCIETY  
Hotel du Pont  
12:45 P. M.**

**GENERAL SESSION**

**Delaware Academy of Medicine**

**2 P. M.**

2:00 P. M.—Diagnosis and Treatment of Brain Tumors.

**Francis C. Grant, M. D., Philadelphia.**

2:40—Chronic Ulcerative Colitis—Impressions Gained from a Review of One Hundred Cases.

**Henry L. Bockus, M. D., Philadelphia.**

3:00—Cancer of the Larynx: Its Diagnosis and Surgical Cure.

**Gabriel Tucker, M. D., Philadelphia.**

4:00—Foetal Mortality in Relation of Methods of Delivery.

**Morris W. Vaux, M. D., Philadelphia.**

4:40—Post-operative Complications, with Special Reference to Water and Chemical Balance.

**Damon B. Pfeiffer, M. D., Philadelphia.**

**BANQUET**

**Hotel du Pont**

**Subscription \$2.00**

**Dress Optional**

**8 P. M.**

**WEDNESDAY, OCTOBER 9TH, 1935**

**GENERAL SESSION**

**Delaware Academy of Medicine**

**9:30 A. M.**

9:30 A. M.—Some Uncommon Bone Lesions.

**B. M. Allen, M. D., Wilmington.**

10:00—Closed versus the Open Reduction of Fractures.

**Hubley R. Owen, M. D., Philadelphia.**

10:40—The Diagnosis of Coronary Arteriosclerosis and Its Complications.

**Charles C. Wolfert, M. D., Philadelphia.**

11:20—Immunity and Vaccination in Acute Poliomyelitis.

**John A. Kolmer, M. D., Philadelphia.**

12:00—Election of President.

**LUNCHEON**

**By the**

**MEDICAL SOCIETY OF DELAWARE**

**Hotel du Pont**

**1:00 P. M.**

**EXHIBITS**

**Charles Lentz & Sons, Philadelphia**

**Philip Morris & Co., New York**

**WOMAN'S AUXILIARY**

**to the**

**MEDICAL SOCIETY OF DELAWARE**

**WEDNESDAY, OCTOBER 9th, 1935**

**Hotel du Pont**

**10 A. M.**

**REPORTS**

Secretary . . . . . **MRS. GERALD A. BEATTY**

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Delegate to A. M. A.,

**MRS. CHARLES E. WAGNER**

President . . . . . **MRS. JOSEPH S. MCDANIEL**

Nominating Committee

**GUEST SPEAKERS**

**MRS. PRENTICE WILSON** . . Washington, D. C.

President of Woman's Auxiliary,

**M. S. of D. C.**

**DR. PAUL R. SMITH** . . . . . Wilmington

Chairman, Auxiliary Advisory

Committee, **M. S. of D.**

**LUNCHEON**

**Hotel du Pont**

**1:00 P. M.**

**Social Afternoon**



## *The President's Page*

To the Members of the Medical Society of Delaware:

The Medical Society extends a very cordial invitation to all physicians to attend the yearly convention to be held in Wilmington, October 8th and 9th, at the Delaware Academy of Medicine.

From a scientific standpoint these conventions in the past have been very instructive, the speakers on the programs have been among the best, and much good has been derived by all those physicians that have attended. Our programs have been a credit to any state medical society. This year our program committee has made it possible for us to have on our program a number of the outstanding men of the profession—men who have been making medical history.

I make a special plea for our members to attend *all* of the meetings this year. It is rather discouraging for a speaker to talk to half empty chairs. I feel that each and every member of this Society owes a little effort along the ~~lines of~~ loyalty and courtesy to make it a point to be at this convention. It is the height of my ambition as President of the Society to see the largest attendance that we have ever had. You owe it to the Society, and to all those who have given their time and energy to make this convention a success.

Hoping you will take seriously my appeal, and make every effort to attend throughout the whole program, I am

Fraternally yours,

J. D. NILES.

# EDITORIAL

## DELAWARE STATE MEDICAL JOURNAL

Owned and published by the Medical Society of Delaware. Issued about the twentieth of each month under the supervision of the Publication Committee.

W. EDWIN BIRD, M. D. .... EDITOR  
Du Pont Building, Wilmington, Del.

WILLIAM H. SPEER, M. D. .... Associate Editor  
917 Washington St., Wilmington, Del.

M. A. TARUMIANZ, M. D. .... Associate Editor & Bus. Mgr.  
Du Pont Building, Wilmington, Del.  
Telephone, Wilmington, 4368

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Manuscript should be sent in typewritten, double spaced, wide margin, one side only. Manuscript will not be returned unless return postage is forwarded.

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Reprints of original articles will be supplied at actual cost, provided request for them is attached to manuscripts or made in sufficient time before publication.

All correspondence regarding editorial matters, articles, book reviews, etc., should be addressed to the Editor. All correspondence regarding advertisements, rates, etc., should be addressed to the Business Manager.

Local news of possible interest to the medical profession, notes on removals, changes in address, births, deaths and weddings will be gratefully received.

All advertisements are received subject to the approval of the Council on Pharmacy and Chemistry of the American Medical Association.

It is suggested that wherever possible members of the State Society should patronize our advertisers in preference to others as a matter of fair reciprocity.

Subscription price: \$2.00 per annum in advance. Single copies, 20 cents. Foreign countries: \$2.50 per annum.

VOL. VII SEPTEMBER, 1935 No. 9

### RE: POLIOMYELITIS

Despite the fact that the end of the usual poliomyelitis season is almost in sight, this dread disease is still reaching out for more victims. In at least four states—Virginia, North Carolina, Tennessee and Massachusetts—it has reached epidemic proportions, averaging 400 cases in each of them. New York State is reported to have had approximately 500 cases. In New Jersey, Pennsylvania and Delaware it has remained sporadic, with only a slight rise in the usual case incidence. Once again, it has lingered longest and strongest along this seaboard, and once again has spread via those routes that are the most travelled.

Delaware has been fortunate in that only three cases have arisen so far, with no deaths. To the State Board of Health largely goes

the credit for this enviable record, since it was they who, early in the summer, required all persons coming from suspect areas and remaining in the state over 24 hours to submit to a medical check-up daily. The response from the travelling public has been immediate and thorough, and undoubtedly prevented the spread of polio by contacts from other states. Delaware was the first state to institute this regime, and, though criticized at first, the end seems to have justified the means.

While we are all familiar with the typical polio syndrome, many cases are atypical, and the findings, prior to the paralytic stage, are so confusing that a diagnosis cannot be made. In this connection we find quite *a propos* the following editorial from the September, 1935, issue of the *Virginia Medical Monthly*.

#### THE PARADOXES OF POLIOMYELITIS

We call it infantile paralysis, but only a small proportion of its victims are infants, and less than one out of sixteen who are attacked by the disease develop paralysis, and many of these recover muscle function almost completely.

The spread of no other disease occasions such general alarm as poliomyelitis, and yet there has never been a pandemic such as has frequently occurred of influenza for example. When outbreaks of poliomyelitis have assumed epidemic proportion they have been remarkably restricted, rarely exceeding in this country the boundaries of more than one or two states.

Although undoubted instances of its sporadic manifestations are on record as early as the time of ancient Egypt and we are now accustomed to look upon it as one of our common epidemic diseases, the first well-known record of the epidemiological manifestations of poliomyelitis (Medin) is hardly fifty years old.

Most epidemic diseases show fairly predictable periodicity—measles for instance. The outbreaks of poliomyelitis are extremely irregular and do not conform to recognized epidemiological laws.

The fact that individuals who have poliomyelitis usually enjoy life-long immunity from a second attack, and that experimentally animals show resistance to reinfection, suggests the presence of antibodies of high titre in the so-called immune serum. Yet, in a number of instances, carefully controlled attempts to abort the disease in the pre-paralytic stage by the use of immune serum have not produced convincing results.

Contrary to expectations the serum of normal persons, persons who are not supposed to have had poliomyelitis, appears to be about as effective in neutralizing emulsions of the virus as the so-called immune serum.

Although pathological studies suggest the intestinal tract as the portal of entry of the virus, recent animal research indicts the naso-pharynx indicating extension along nerve fibres, and

epidemiological study emphasizes the importance of droplet infection.

Although the cerebro-spinal lesions of poliomyelitis, particularly those of the anterior horn, have dominated pathological descriptions, it is widely claimed that poliomyelitis is primarily a disease of the reticuloendothelial system with widespread evidence of general lymphoid hyperplasia.

Although the disease strikes rich and poor alike, the favored as well as the unfavored, certain individuals appear to be practically immune to its ravages. They are those persons who are the fortunate possessors of the so-called B agglutinins in their blood.

Although spinal puncture has been highly regarded as a therapeutic procedure, there seems to be accumulating evidence that in those instances in which it is resorted to before the disease has reached the cord structures, or where an excessive amount of cerebro-spinal fluid is withdrawn, it may do actual harm.

Although a mononucleosis is usually described as the typical cell change in the spinal fluid of poliomyelitis, in many instances a polymorphonuclear leucocytosis is the finding.

The Drinker respirator is popularly regarded as a life saver in the bulbar type of case, but those with experience in the use of this apparatus now tell us that it may do more harm than good, and that its use should be restricted to those spinal cases in which there is weakness or paralysis of the accessory muscles of respiration.

Although the disease is still generally considered a systemic infection, at least in its earliest stage, the right of the general practitioner to assume complete management of it has been challenged by at least three specialists—the neurologist, who maintains that its cerebro-spinal manifestations place the disease in his domain, the orthopedist, who views its crippling and deforming sequelae as peculiarly entitling him to the care and treatment of the disease even in its acute manifestations, and the pediatrician who quite naturally considers the age incidence of the disease as entitling him to certain priorities.

#### *Vaccination in Poliomyelitis*

Two vaccines are prominently before the medical profession at the present time.

Kolmer's vaccine is a pooled 5 per cent suspension of the emulsified cords of poliomyelitic monkeys in 1 per cent sodium ricinoleate to which has been added 1:80,000 phenyl mercuric nitrate. It is administered in three weekly ascending doses of from 5 c.c. to 2 c.c. according to the age of the patient. Aside from slight local reactions few untoward effects have been reported. Kolmer and others have showed that this type of vaccine protects monkeys from otherwise fatal doses of poliomyelitis virus. He has showed also in a small group of twenty-five children of various ages that 75 per cent of those without the presence of antibodies in their blood before vaccination develop large amounts (as demonstrated by virus neutralization tests) as early as one week after the last dose of vaccine.

It is recognized that Kolmer's vaccine consists of a live though attenuated poliomyelitis virus (a virus that has been fixed by repeated animal passage and whose virulence has been lessened by the addition of sodium ricinoleate). The vaccine is capable of giving poliomyelitis to monkeys if administered intracerebrally in sufficient doses. It is believed that the virus actually multiplies after it has been injected into the human body, the size of the dose and the route of inoculation making this a favorable rather than an unfavorable result. The duration of immunity conferred by the

vaccine is unknown. Kolmer has to date inoculated more than 6,000 children with it without any untoward results. It may be obtained directly from him at small cost.

Brodie's vaccine consists of a 10 per cent virus suspension of the emulsified cords of monkeys inactivated with .1 per cent of formalin for from sixteen to forty-eight hours. It is given in a single 5 c.c. dose or repeated after ten days. The latter method is said to give greater protection. Brodie's vaccine has now been given to more than 4,000 children with only negligible reactions and he considers it perfectly safe as no amount of the vaccine injected intracerebrally in monkeys is capable of producing the disease. Demonstrable antiviral substances can be shown in the sera of vaccinated children and it is believed that the degree of protection is "quite appreciable." Brodie's vaccine while being employed experimentally on an extensive scale is still not commercially available.

The average doctor will want to know are these vaccines safe? Do they produce immunity? Is the immunity sufficient to protect against the disease? And how long does immunity last? The last two questions appear to be yet unanswered.

#### *Serum in Poliomyelitis*

The case for serum may be summarized briefly by saying that poliomyelitis considered by many to begin as a systemic disease (pre-paralytic stage) with a definite period during which the central nervous system is not involved and during which theoretically an antibody potent serum should prevent paralysis. Antibodies capable of neutralizing poliomyelitis virus can be demonstrated in the blood of convalescents and even in certain normal individuals. A number of investigators have reported the favorable use of convalescent serum clinically in several large series of cases.

On the other side it is argued that poliomyelitis is not a systemic disease at any time but a neurological disease from the onset, that virus is fixed to nerve tissue possibly as early as the period of incubation, that serum cannot reach the virus by the blood route and that even if it could there is evidence to show that the virus can multiply even in its presence. Even large doses of immune serum have failed to protect monkeys from infective doses of virus if given after inoculation. In those instances in which clinical trials of convalescent serum have been carefully controlled and used on a sufficiently large scale no convincing results have been shown to follow its use.

#### *The Ideal Immune Serum*

Landon and Smith in their *Handbook on poliomyelitis* suggest several criteria for a theoretically effective convalescent serum in the treatment of acute anterior poliomyelitis. According to them it should be of known neutralizing titre. It should be obtained from a woman possessed of the B type of agglutinin and should be collected during the third month of pregnancy. The donor must have recently recovered from an abortive attack of poliomyelitis. Finally it should be administered in sufficiently large dosage.

Of further interest is the editorial in a similar view, from the September, 1935 issue of the *Southern Medical Journal*:

#### STUDIES OF POLIOMYELITIS

In prevention of yellow fever, all methods of sanitation and antiseptics were useless until it was demonstrated that the infectious agent was transmitted by a single species of mosquito. In



the case of poliomyelitis, an insect carrier has not been demonstrated, but attempts to infect monkeys have proven a remarkably limited path of invasion. The living body seems to be vulnerable to this virus at only two points, and these are smaller and more inaccessible than the heel of Achilles. Recent studies have brought out many facts of interest.

Infantile paralysis is said to resemble diphtheria in some of its reactions in the body, particularly in its choice of human victims.<sup>1</sup> Both are serious diseases of children, the susceptibility rate being lower than that of measles or whooping cough. With both, it is probable that light infections occur which gradually immunize a large part of the population. General health seems to bear no direct relation to susceptibility. Age is the potent factor, small children being more commonly susceptible, while the proportion of immunes increases with the age group. Probably most adults are immune. In the case of diphtheria, there is a test for susceptibility. In infantile paralysis, this practical aid is lacking.

Various biological fluids are reported to neutralize the virus of poliomyelitis outside the body. Among these are the nasal secretions of healthy adults, placental extract, pregnancy urine, vitamin C and several endocrine extracts. Undiluted human tears, according to Jungeblut,<sup>2</sup> of New York, rapidly inactivate it. Saliva and spinal fluid of the same individuals have no destructive effect, and spinal fluid even of monkeys convalescent from infantile paralysis and with a high titer of immune serum fails to neutralize the virus.

The pathology seems to be limited to the central nervous system, with no lesions outside the nervous tissues.<sup>3</sup> Flexner and Lewis showed some years ago that the path of infection is through the nose. Schultz and Gebhardt,<sup>4</sup> of Stanford University, in 1934, presented evidence that the virus after intranasal inoculation gains admission to the central nervous system through the nerves of smell. When these nerves were sectioned by cauterization of the olfactory bulbs, virus placed in the nose failed to induce the disease. The same animals were later infected by inoculation directly into the cerebrum, showing that the barrier was mechanical and local; they had no general immunity.

Lennette and Hudson,<sup>5</sup> of the University of Chicago, have confirmed and extended the observations of the Californians. Normal monkeys are extremely susceptible to intranasal inoculations of polio virus. To infect them by the intravenous route, massive doses must be used. Even then the virus is excreted from the blood stream into the nasopharynx and is present in the nasal washings before the onset of the disease. If the olfactory bulbs are cauterized, heavy intranasal inoculation does not produce the disease. After intravenous inoculation in the same animals, the virus may again be recovered from the nasal secretions, showing that it has been excreted into the nose, but the disease does not develop. Not only the usual entrance, but the sole entrance, in the monkey is apparently these nerves; even if the virus is in the circulating blood it can reach the susceptible central nervous system only through the olfactory passage.

Since these nerves are the only path of entry, elimination of them should close the door to systemic infection. Olfactory section thus possibly offers a surgical prevention of the disease. Any individual given the two alternatives, infantile paralysis or olfactory section, would sacrifice his sense of smell rather than his means of locomotion. In view of the uncertain course of infec-

tion even after definite exposure, nerve destruction will hardly be attempted as prophylaxis. A temporary harmless blockage of these vulnerable points by antiseptics during an epidemic would have experimental interest. In difficulty it would probably compare with the difficulty of antiseptics in the blood stream. Though polio virus appears to be fairly easily recovered from nasal washings of monkeys with the disease, it is reported to be quite difficult to obtain it in the same manner from human beings.<sup>6</sup> This may indicate either a higher degree of human immunity, or a difference in the course of the infection.

1. Zmer, R. L.; and Jungeblut, C. W.: Effect of Various Cortico-adrenal Extracts on Diphtheria Toxin in vivo and in vitro. *Proc. Soc. Exper. Biol. & Med.*, 32:1583, June, 1935.

2. Jungeblut, C. W.: Occurrence of Poliocidal Substances in Tears, Saliva and Cerebrospinal Fluid of Normal Individuals. *Proc. Soc. Exper. Biol. & Med.*, 32:1534, June, 1935.

3. Brodie, Maurice: Role of Convalescent Serum in Preparatory Poliomyelitis. *Jour. Immunol.*, 28:353, 1935.

4. Schultz, E. W.; and Gebhardt, L. P.: Olfactory Tract and Poliomyelitis. *Proc. Soc. Exper. Biol. & Med.*, 31:728, 1934.

5. Lennette, E. H.; and Hudson, N. P.: Relation of Olfactory Tracts to Intravenous Route of Infection in Experimental Poliomyelitis. *Ibid.*, 32:1444, June, 1935.

6. Trask, J. D.; and Webster, L. T.: Isolation of Poliomyelitis Virus from the Nasopharynx. *Jour. Exper. Med.*, 62:245, Aug. 1935. Kramer, S. D.: Detection of a Healthy Carrier of Poliomyelitis without History of Contact. *Proc. Soc. Exper. Biol. & Med.*, 32:1165, 1935.

Officers and committees of the Medical Society of Delaware are now engaged in preparing their annual reports for presentation at the Annual Session, which will be held October 7th-10th. We urge all those thus engaged to submit their reports with a maximum of clarity and a minimum of verbosity. No report "clicks" so snappily as does the one that is short and to the point.

The Directory page, printed on the reverse of the President's photo, needs some corrections, we feel sure. Will the organizations listed there please advise us of the corrections that should be made?

Wilmington's cancer facilities grow apace. One of the local radiologists has installed in his office the latest type of shock-proof deep therapy x-ray machine, which develops 220,000 volts and which guarantees a beam of radiation more nearly approaching the rays of radium than any heretofore found practical. Thus progress marches on.

Last year 65 per cent of our members attended the Annual Session at Dover, a record equalled by few states. Let us surpass our own record this year. On to Wilmington!

## MISCELLANEOUS

### American Medical Directory

The work of revising and compiling the new Fourteenth Edition of the AMERICAN MEDICAL DIRECTORY has been started.

After every Directory is published a number of complaints are received from physicians who have not been listed as members or fellows of the American Medical Association. Some of these men have possibly lost appointments with industrial firms, insurance companies, railroads, etc., because they were not indicated as members. They may have been members and let their membership lapse, or new men in the community who failed to join their local society in time to indicate this information in the Directory.

To eliminate such criticism, we are notifying all delinquents and eligible applicants that a new Directory is going to be published. We call to the attention of our readers the importance of sending in their data promptly when requested, and the keeping up of their membership in our Society.

It will probably be two years, or 1938, before another Directory will be issued.

---

### International Assembly

The Inter-State Postgraduate Medical Association of North America extends a very cordial invitation to all physicians in good standing to attend the International Assembly of the Association, to be held in the city of Detroit, Michigan, October 14 to 18, inclusive, 1935.

An unusually interesting clinical and didactic program including all branches of medicine and surgery and the specialties, has been arranged by the program committee.

In co-operation with the Michigan State Medical Society, the Wayne County Medical Society, and with the active support of the Detroit Convention and Tourist Bureau, and the Detroit Board of Commerce, a most excel-

lent opportunity for an intensive week of postgraduate medical instruction is offered by a very large group of acknowledged leaders in the profession.

The registration fee is \$5.00. The railroad fare, on the "Certification Plan," is one and one-third fares for the round trip. There will be no advance in hotel rates.

The assembly is the second largest medical convention in the world, being exceeded only by the American Medical Association. Dr. Charles H. Mayo is the President for 1935.

---

### American College of Surgeons

The Clinical Congress of the American College of Surgeons will be held in San Francisco and Oakland, October 28-November 1, 1935. The two medical schools and twenty-seven hospitals will participate in the clinical program, and will present a complete showing of their activities in all branches of surgery. The registration fee is \$5.00, and the fare one and one-third, on the "Certification Plan." The hotel rates will not be advanced.

Dr. Robert B. Greenough, of Boston, is President, and Dr. Donald C. Balfour, of Rochester, Minnesota, is the President-Elect.

---

### New York Academy of Medicine

The Eighth Annual Graduate Fortnight of The New York Academy of Medicine will be held October 21 to November 2 and will be devoted to a consideration of DISEASES OF THE RESPIRATORY TRACT.

Eighteen important hospitals of the city will present co-ordinated afternoon clinics and clinical demonstrations. At the evening meetings prominent clinicians from various parts of the country, who are recognized authorities in their special lines of work, will discuss various aspects of the general subject.

A comprehensive exhibit of books and of anatomical, bacteriological and pathological specimens and research material will be assembled. Demonstrations will be held at regular intervals.

The registration fee is \$2.00.



## BOOK REVIEWS

New and Nonofficial Remedies, 1935. Containing Descriptions of the Articles Which Stand Accepted by the Council on Pharmacy and Chemistry of the American Medical Association on January 1, 1935. Cloth. Price \$1.50. Pp. 510. Chicago: American Medical Association, 1935.

In this book the Council on Pharmacy and Chemistry lists and describes the medicinal preparations that it has found acceptable for general use by the medical profession. A glance at the list of the Council members and the long list of consultants appearing in the first part of the book gives ample warrant for the authority of the Council selections.

Not only does the Council "accept" new preparations but from time to time it omits those which have been accepted but which have not with the lapse of time upheld their original promise, of therapeutic merit. The list of omissions for 1934 shows that the Council has been mainly concerned in this respect with B. acidophilus preparations and with antiseptics. Several preparations of each class have been omitted. The list of admissions does not reveal the presence of any preparation that promises to be epoch making in the sense that insulin was, for instance. However, the following newly accepted preparations are noteworthy; Carbarsone, an arsenical used chiefly in the treatment of amebiasis (the Council published a special report on this drug, supplementing the preliminary report of 1932); Hippuran and Diodrast, two different types of urographic contrast mediums; Carotene, the precursor of vitamin A; Dilaudid, a substitute for morphine; Neo-Synephrin Hydrochloride, which has a number of advantages as a vaso-constrictor over synephrin tartrate; and Diothane, which represents a type of local anesthetic entirely different chemically from any heretofore accepted for N. N. R.

The description of products containing vitamins A and/or D have been revised to give the potencies in terms of the recently adopted pharmacopeial units, thus bringing some measure of uniformity into this heretofore chaotic field. No doubt the book will be revised next year to conform with the new Pharmacopeia in its entirety.

A valuable feature of the book is the grouping of preparations in classes. Each of these is introduced by a general discussion of the group. Thus the silver preparations, the iodine preparations, the arsenic preparations, the animal organ preparations and the biologic products are each preceded by a general discussion of the particular group. These general articles compare the value of the products included in the group with similar pharmacopeial and other established drugs which it is proposed that these proprietary preparations shall supplement or supplant.

Physicians who wish to know why a given proprietary is not described in New and Nonofficial Remedies will find the "Bibliographical Index to Proprietary and Unofficial Articles not Included in N. N. R." of much value. In this section (in the back of the book) are given references to published articles dealing with preparations that have not been accepted. These include references to the Reports of the Council, to Reports of the A. M. A. Chemical Laboratory and to articles that have appeared in The Journal.

---

Annual Reprints of the Reports of the Council of Pharmacy and Chemistry of the American Medical Association for 1934, with the Comments That Have Appeared in The Journal. Cloth. Price \$1. Pp. 135. Chicago: American Medical Association, 1934.

Each succeeding volume of reports of the Council reveals more of the long and successful fight in the interest of rational therapeutics. The Council is no longer chiefly concerned with noisome proprietaries and yet this latest volume contains reports on such articles as "Vita-Cell," a secret preparation marketed with exaggerated claims, and "Raylos," a shotgun preparation marketed in a way to promote its ill-advised use by the public. Most of the "unacceptable" reports in this volume are concerned with products that may have some merit but are not offered to the public in a way which experience has taught the Council is necessary before a therapeutic agent is acceptable. Such products are Iodine Dusting Powder (Sulzberger), rejected for lack of clinical evidence of its advantage over one of its con-



stituents; Pernoston, rejected because of lack of clinical evidence to justify routine intravenous injection of barbital compounds; Di-Hydranol, a claimed bactericidal agent proposed for use as an "intestinal antiseptic," a claim not supported by sufficient clinical evidence; and Squibb Adex Tablets, a product containing a concentrate of vitamins A and D, for which the firm could not agree to adopt a more informative name.

To those who have followed the Council's investigation of *B. acidophilus* therapy, the report "*Acidophilus Bacillus Liquid-Mulford and Mulford Acidophilus Bacillus Block Omitted from N. N. R.*" will be of interest. The Council has apparently not yet reached an ultimate conclusion concerning *acidophilus* therapy, but it has for years held that no product could be expected to be of value unless it could show at least one hundred million viable *B. acidophilus* organisms at the "date of expiration." Competent bacteriologic examination showed that the two preparations here reported were inferior to this standard. Further grounds for omission were the failure of the manufacturer to comply with certain stipulations in regard to labels and advertising. Another noteworthy omission is that of Alpha-Napheo and its dosage forms, omitted because the Council on reconsideration found that it is a weak antiseptic.

The Council also issues preliminary reports, which define the status of new preparations for which the evidence is not yet sufficient to justify their presentation to the medical profession generally. Preliminary reports do not imply rejection but rather postponement of consideration until more evidence is reported by competent investigators. These reports are the outposts of therapeutic progress and as such are valuable sources of information to physicians. In this volume there are preliminary reports on Adrenal Cortex Extract, concerned mostly with scientific terminology, Cysteine Hydrochloride, Dihydroxy-Anthranol (Anthralin), Gastric Mucin, Hemoprotein (Brooks), Phenylmercuric Nitrate and Phenylmercuric Chloride.

Illustrative of the Council's efforts to keep those concerned informed of the basis for its

actions are the "Recent Revisions or Elaborations of the Council's Rules of Interest to Manufacturers and the Medical Profession," which have appeared in the last two volumes. These inform the profession of the various problems which arise and the care given to their consideration. To be commended also is the "Report on Sterility of Ampule Preparations."

---

*Diseases of the Thyroid Gland:* By Arthur E. Hertzler, M. D., Professor of Surgery, University of Kansas. Third edition. Pp. 348, with 181 illustrations. Cloth. Price, \$7.50. St. Louis: C. V. Mosby Company, 1935.

Hertzler's book on the thyroid is one of the classics of the day. A close observer and a persistent student, he has done more than any other American worker to correlate and to reconcile the clinical, the operating room, and the laboratory pictures in thyroid disease. More critical of himself than others, he has acquired the voice of authority by re-studying, year after year, every case about which he gets any news, and his personal follow-up is perhaps the most complete of any surgeon in the country. Thus he knows, as he says, that goitre is a life-time disease ending in cardiac death, unless appropriate treatment be instituted.

The new edition is practically a re-writing, and contains 62 more pages and 22 more illustrations than the second edition (1929). Incidentally, the illustrations of the operations are augmented and are better arranged. This is a book for every internist, surgeon and pathologist who comes in contact with a goitre patient.

---

*On Health's Highways:* By the New York City Cancer Committee. Pp. 341. Paper. New York: 1935.

This little brochure of illustrations is an exhibit of what animal experimentation in various medical fields has done to aid in the control of cancer. An informative and interesting booklet, it is to be hoped that it will reach those who need it most, the rabid antivivisectionists. If it does, it should do a lot of good. The foreword is by Dr. John C. A. Gerster. The New York City Cancer Committee is a unit of the American Society for the Control of Cancer.

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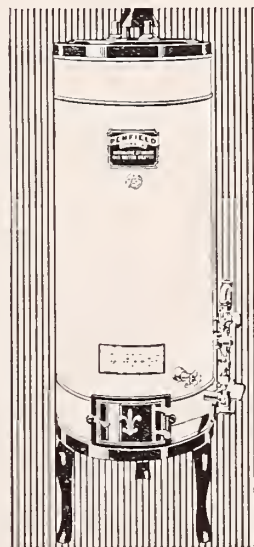


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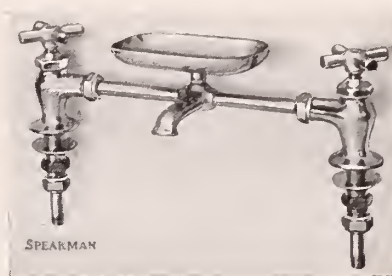
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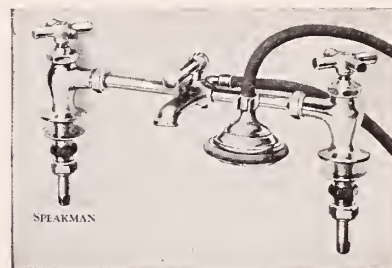
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Official Organ of the Medical Society of Delaware

INCORPORATED 1789

VOLUME VII  
NUMBER 10

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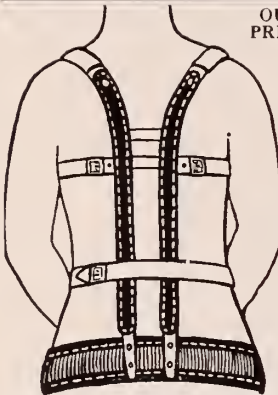
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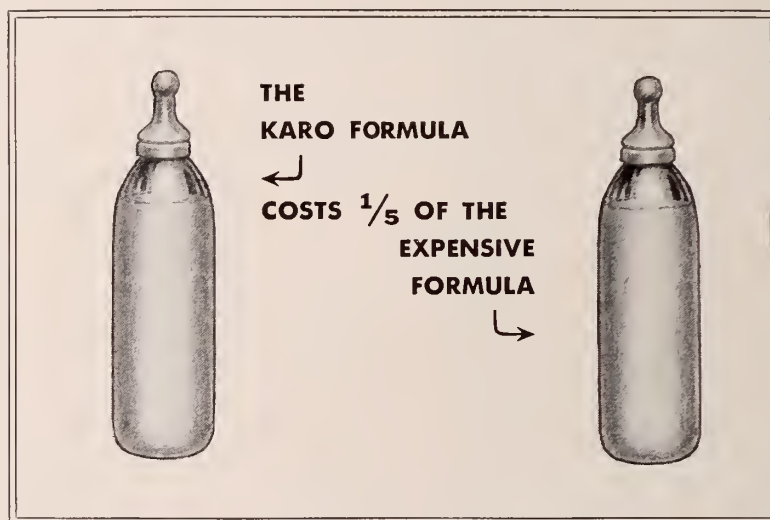
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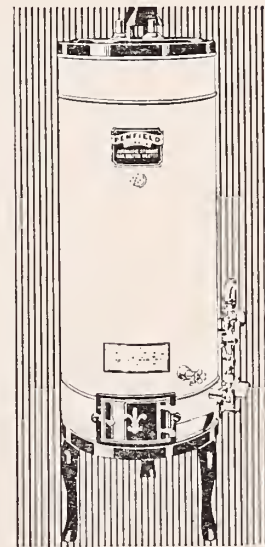
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## MEDICAL ETHICS: THEN AND NOW\*

JEROME D. NILES, M. D.,

*President of Medical Society of Delaware for 1935*  
Townsend, Del.

The subject of medical ethics has been debated, discussed and argued about. It is very much like religion—no one doubts or disputes the fundamental principles.

The first code of medical ethics that we know of, for the government of medical practice, was that of Hammurabi, dated 2250 B. C. The monument on which it is recorded was discovered in 1901 on the Acropolis of Susa. Hammurabi was the sixth king of the first dynasty of Babylon, and the writings on the monument show the king received the laws from the Sun God.

This code and the Smith papyrus found in Egypt give us our earliest knowledge of conditions in the medical profession. We learn that even in the earliest times physicians' charges were controlled, carelessness in practice was punished by law, and warnings were issued against poor judgment and rash surgical intervention.

A second landmark, set up about 1,800 years later, is to be found in the work of Hippocrates, the great Greek physician. These Hippocratic writings, as we might have expected of one who was a contemporary of Socrates and Plato, reveal a high conception of professional responsibility, noble moral ideals, and lofty aspirations for medical behavior.

It is significant that the Greeks did not bother about details of "ethical practice." The guiding principle was that the physician would help, or at least do no harm to suffering humanity.

To be certain of good character on the part

of physicians, it is probable that the several groups of teachers at the health temples and public medical centers required an indenture of persons training for the practice of medicine. This probably developed into the famous oath of Hippocrates. Its chief provisions were that the physician would call a consultant if in doubt, be reasonable in fees, and if necessary forego them entirely, lead a pure and moral life, trying to be, in the highest sense of the word, a philosopher, and respect and honor his teachers.

The physician should not give nor sanction the giving of a poison, cause nor encourage abortion, use his position to debauch a patient nor any member of the patient's household, divulge information about a patient, advertise in any manner, nor assume ostentation in dress or manner.

These simple criteria of professional dignity were the ideals of medical etiquette for over two thousand years, and are still the traditional basis of modern codes. Practically every great leader in medicine has echoed the admirable ethical principles of the Hippocratic writings.

At the beginning of the last century a publication appeared which deserves to rank as a prominent landmark of progress in these matters. Percival's "Code of Medical Ethics," published in 1803, a classical book in its best sense, is so good that it has served as a model for nearly all books and pamphlets that have been published since that time.

Thomas Percival was born September 29, 1740, in Warrington, Lancashire. His parents died when he was three years old, and he grew up under the guidance of an elder sister. Handicapped physically by poor vision and headaches, Percival was a scholarly and judicious thinker, highly respected for his personal charm and character. He was greatly

\* Presidential address, delivered before the Medical Society of Delaware, Wilmington, October 8, 1935.

interested in social problems, and his whole life was influenced by love for his fellowmen.

With the rise of industrial manufacturing, Percival became impressed with the necessity for improving factory hygiene, and advocated regulations for ventilation, rest rooms, and general cleanliness.

He was not only an excellent private practitioner, but he also engaged in philosophical and experimental inquiries. The topics of encouragement and consolation which he addressed to the sick derived efficacy from a countenance expressive of a benignant sympathy, genuine goodness of heart, and an elegant and impressive character from the abounding stores of a cultivated mind.

In the code proper, Percival emphasized the combination of "tenderness with steadiness" and "condescension with authority" in the management of hospital and charity cases. Discussion of the case before the patient, particularly when the outlook is bad, should be avoided. Secrecy when required is strictly to be observed, and females are to be treated with the most scrupulous delicacy.

Talent for the profession consists in personal qualifications, which are not to be transferred, experience, discrimination, presence of mind, fertility of resources, exquisite tact, above all law, capable of deciding in the critical hour, and a discretionary power like equity, having no established rules.

Percival's discussion of conduct in private and general practice is fully as interesting as his comments on hospital practice. The same moral rules of conduct prescribed towards hospital patients holds good.

In dealing with the physician in later life, Percival says "the commencement of that period of senescence, when it becomes incumbent on a physician to decline the offices of his profession, it is not easy to ascertain, and the decision on so nice a point must be left to the normal discretion of the individual. But in the ordinary course of nature, the bodily and mental vigor must be expected to decay progressively, though perhaps slowly, after the meridian of life is past. As age advances, therefore, a physician should from time to time, scrutinize impartially the state of his faculties, that he may determine, bona fide,

the precise degree in which he is qualified to execute the active and multifarious offices of his profession."

"The physician is one whose relation to life and health are of the most intimate character." It is fitting not merely that he should possess a knowledge of diseases and their remedy, but also that he should be one who may safely be trusted to apply those remedies.

Character is as important a qualification as knowledge, and if the legislator may properly require a definite course of instruction, or a certain examination as to learning, it may with equal propriety prescribe what evidence of good character shall be furnished. These propositions have been affirmed.

For the average physician, medical ethics (of which there is no satisfactory exposition) means only medical etiquette, and actually there is usually as great a penalty attached to a transgression of one, as of the other. "Medical etiquette is concerned with the conduct of physicians toward each other, and embodies the tenets of professional courtesy."

Medical ethics would be concerned with the ultimate consequences of the conduct of physicians towards their individual patients, and towards society as a whole, and it should include a consideration of the will and motive behind this conduct.

One hundred years later at a meeting of the American Medical Association held in New Orleans, May 7, 1903, a new code of medical ethics was drafted, and in 1912, was revised, to cover very completely the needs of modern practice of medicine. The principles of the revised code of 1912 have much in common with Percival's original. The principles of medical ethics of the American Medical Association you all know, or at least should know. They are as follows:

The duties of physicians to their patients.

The duties of physicians to each other, and the profession at large.

The duties of the profession to the public.

I will not go into the principles and what they cover in detail at this time except to state that through all of these hundreds of years the principles of medical ethics, now as well as of the past, have preserved the balance of the structure of the medical profession

most gloriously, and have done so with very few changes.

Now we come to the present. We are in a new era of the practice of medicine. We step from a period of the past thirty years of pleasant progressive and history making advancement in medicine and surgery to a time when every physician feels the sudden jolt of the depression. He finds himself suddenly burdened with financial cares, due to his investment losses, and his income is greatly reduced, due to financial losses of the community at large.

Finances have always been a stumbling stone to the progress of science as well as to industry, and we now picture the average physician of today in his present dilemma. The young graduate is trying to get started at a time when money is so hard to get. The physician of middle life who has been more or less successful, has worked hard, accumulated and saved for the future, built up around him, a family with children to educate, and a practice that has increased his overhead expenses, with the sudden losses of his investment and great decreases of income, we have here another man burdened with worry, and desperate with the thought of, what shall I do?

Then, too, we have the man past middle life, he also suffers from losses and decreases in income. His future looks very dark, he is not as active as of old, he is tired, and feels the stings of failure, and has only the mental picture of chaos. This is true of course with all professions and industries.

Having this picture in our minds, let us take the position as one resting upon the oars, and wondering what the psychic effect is upon the medical profession, and what havoc has or will be wrought to the structure of this great and noble science. At heart every true physician wants to live according to and carry out the principles of our traditional code of ethics.

There is no profession or business less exploited by money-mad promoters and politicians than the medical profession of today, and yet those with their fingers on the pulse of the trend of politics can easily see that these types of human parasites have their

hungry eyes on the chances of commercializing medicine. They readily see that with the principles of our code of ethics, our forefathers have built up in the laity of the world a faith, a trust, and a reverence like a great monument which casts its light of honor and honesty over all the earth, and if in any way they could wedge into the structure of this monument great riches and political power could be gained by their exploitations.

Here again we have to be on our guard, and think of what is the best method to fight these so-called termites of destruction. There is but one answer—we must stick to the principles of our code of ethics.

The question arises. Are we adhering to the principles of our code of ethics? Are we being influenced by outside exploiters? Is the young graduate stepping into the picture with so-called socialistic ideas overriding the old principles and instilling new, to conform with the very wishes of our enemies, or is he being held steady by the influence of the older physician, who knows the value of adhering to the old principles?

And the older man, what of him? Is he still the example and the ideal of the younger man? Is it possible that he could turn from the straight and narrow path, due to financial stress and keen competition? Is it possible that he lost the desire to be an ideal physician, and has turned to the easier methods, as he thinks, of gaining a livelihood by bending to the things we all abhor, commercializing medicine, publicity, fee splitting, unfair competition, discounting his colleagues, ignoring all the principles with but one idea, and that is to get his, regardless of cost? And if this type of physician exists, he too falls as an easy prey to the exploiters of medicine, and the structure of ideal medicine is weakened.

These questions can only be answered by the lapse of time, yet I can say without the slightest fear that I may be overstating conditions that there is no profession which is more exposed to the temptation to forget honor, humanity, and kindness, than the medical profession, and none in which the exploitation of human suffering is easier. Yet there is none in which the temptation is so



triumphantly withstood. Let this be remembered by the public when they feel inclined to sneer at medical ethics, and to speak of it as if it were a code for maintaining selfishness and enrichment.

Medical ethics is the salvation of the patient. It is the one thing which stands between him and the dangers of exploitation. It is what makes him and his sufferings hold the dominant part in the dreaded dramas of diseases.

The advent of the radio has added a new and wholesale approach of medicine to the public, and has brought with it, perhaps yet unappreciated, opportunities and privileges. Opportunities and privileges of awakening interest in scientific attainment of medical science, and of exposing quackery, both within and without the profession, obligations to broadcast information to those who are interested concerning the prevention of diseases, and control of epidemics.

But as in all other methods of spreading news and information to the public, the quack or the charlatan has learned to use this medium for the dispersion of spurious information concerning himself and his alleged cures. No need to do more than mention this, because of the amount of publicity recently given to the subject.

And so, I leave with you these thoughts culled from the writings of Leake, Percival, Baker and others, in the hope that this Society, beloved by all of us, will continue to go forward, and that during its progress, in spite of the changes in medical practice that will certainly present themselves as time goes on, we shall ever keep our ethical banner high, that we shall see to it that the superstructure of material medicine does not become too heavy for our ethical foundation and so destroy it all. That we shall guard well the grand traditions which are the heritage of this Society, and that each member of this Society will ever continue to understand and to proclaim "the duties of a physician," and to realize that "it is for us, the living, rather than the dead, to so dedicate and so consecrate this great structure, that it shall long endure."

## THE NASAL ACCESSORY SINUSES \*

### From the Standpoint of the General Practitioner

EMIL R. MAYERBERG, M. D.,  
Wilmington, Del.

In recent years many papers have been written, and many lectures have been given on the subject of diseases of the nasal accessory sinuses. Nearly all of the essayists have approached the subject with the ultimate idea of presenting some new or modified radical operation on one or all of the sinuses.

Frequently, too, photographs, lantern slides, moving pictures, and x-rays of the patients are shown before and after the treatment. Such displays are helpful and valuable, not so much to the general practitioner, but to the rhinologist.

Today I am approaching the question of sinus disease from a different angle. I was most impressed by a talk given by a rhinologist from Denver a few years ago at a meeting of the Philadelphia Laryngological Society. He exhibited x-ray pictures of babies a few minutes after birth, and was able to demonstrate cloudiness of various sinuses, sometimes one or two, sometimes all of them.

This same physician had followed some of these patients over a period of eighteen years at regular intervals and had found them clear at times, and involved at times. And so we might say that sinus conditions do exist from the cradle to the grave, striking at any age, and at any time, under what I believe may be called given conditions.

There are many factors responsible for the production of diseased sinuses. Occasionally we find one or several of them active, but in all there must be some activity of these factors. To my mind, civilization is the most potent factor, and all others are children of advancing and modern civilization.

The foods we eat, the homes in which we live, the office buildings and shops in which we work, and the clothes we wear are all products of an ultra modern civilization, and constitute principal causes for the ever increasing incidence of sinus disease. Add to the above mentioned factors our lessened activi-

\* Read before the Medical Society of Delaware, Dover, October 10, 1934.

ties, our increasing laziness as far as physical exertion goes, and our increasing desires for and acceptance of time and energy-saving luxuries, and in contra-distinction the increased activities of children of all ages, in school gymnasiums and on the playgrounds, forced by the urging of coaches and instructors to excel in competitive sports, carrying many of them far beyond human natural endurance to the point of exhaustion. We have a complete and perfect picture of crime heaped upon crime to destroy a natural God-given resistance.

You know as well as I do that there is an ever growing feeling on the part of the medical profession and the laity that "once a sinus case, always a sinus case," which inspires gloom where hope should be.

We have been lax in the use of preventive measures and in persistent treatment of early cases, being satisfied to remove tonsils and adenoids in children, and then promptly forget about the case. The removal of tonsils and adenoids, nasal obstructions, and diseased nasal tissue, is but the beginning of the treatment in sinus diseases. It paves the way for a cure if attention is paid to the necessary local and general treatment and correction and removal of other underlying factors.

The pendulum swings first one way and then the other. Investigators, through exhaustive research work of the lower animals, bring out from time to time various treatments for the relief of sinus diseases. These treatments for a time are hailed as panaceas; then in a year or two these same research workers refute their own and everyone else's work. Then they bring out improved, new, and just as ineffective cures. Is there any wonder that under such conditions chaos exists? No treatment is a panacea, no particular treatment will cure every case, because all cases are not alike. No case can be cured over-night.

Realizing that these statements are more or less correct, we come down to the fact that the prime requisite in the treatment of sinus disease is a combination of little medication and a great deal of common sense.

I am purposely avoiding a description of the basic pathologic processes and am omitting a recital of symptoms and signs referable

to any particular sinus. It suffices to mention, in a general way, that the sinuses are lined by a mucosa which is a part of the nasal mucosa, that the sinuses have small openings leading into the nose or post-nasal space, and normally the sinuses contain air. Keep the sinus openings free and air in the sinuses and there will be no such thing as sinus disease.

The direct etiological factor is an infection of the upper respiratory tract. The sinuses become involved by contiguity and continuity, and because of the inadequate size of the openings into the nose, resolution is protracted or does not occur until well directed interference is instituted.

The use of various aqueous solutions in nasal irrigations and sprays has long been in vogue, but the practice is not without danger. Such solutions denude the surface of the mucosa of its greatest protective mechanism and produce pathologic changes. The only excuse for their use is that they offer a convenient way for clearing the nasal passages.

The habit of improper blowing of the nose, which forces infected material into the sinuses, may have much to do with causing infection.

The general practitioner is usually the first to see the acute cold case, and that is as it should be. A rational plan to follow in these cases is to consider them as sick patients. Absolute rest in bed, free purgation, light diet, and plenty of fluids, simple medication, principally to alkalinize. Avoid spraying and douching the nose; but use drugs that will shrink the mucosa, such as ephedrin 1½%, adrenalin 1-5000, or cocaine 1 or 2%, followed by any bland aromatic antiseptic oil spray. After the acute symptoms have subsided, the temperature normal, and the patient has been put back on a full diet and a normal routine, continue the oil spray or nasal ointment night and morning until the nose has returned to normal. Follow up with small increasing doses of a mixed sero-bacteria. Give tonics to build up the resistance of the patient; sun light if possible, and in the absence of it during cold winter months, give a course of ultra-violet baths.

Underlying the immediate etiologic factor, however, is the large general problem of

hygiene, allergy, dietetics and preventive medicine. Patients with a tendency toward repeated head colds, should be cautioned to dress according to the weather, they should avoid exercise to the point of exhaustion, and if overheated should avoid becoming chilled. They should avoid bathing when it is necessary to go outside immediately, also, they should not bathe or swim too long during the summer months, nor lie on the beach with wet bathing suits. Chilling permits the invasion of pathologic organisms by lowering the resistance.

More attention should be paid to the heating of houses. Nearly all houses are overheated, particularly in the spring and fall months when the weather is variable, and it is so difficult to regulate the heat. The proper temperature for any house is from 70 to 72 degrees, and provisions should be made to keep the moisture in the home at an even point.

I am not preaching air conditioning, for I feel that some features of this method are wrong. I do not approve of reducing the temperature in the house much below the outside temperature. I believe that while such a process may insure comfort while in the house, people, even normal persons, are really made to suffer when they go outside. That has been my experience after riding in air-conditioned trains. I do feel, however, that air-conditioning is one of the answers to lessening the frequency of colds during the winter months. In most homes no provision is made for the addition of moisture during the heating season.

For years I have been instructing my patients to put large pans of water on radiators so as to bring moisture into the houses. There are several types of receptacles for water manufactured to hang and fit on radiators. It is surprising how rapidly the water will evaporate and how much of it will do so during the time when the furnace is being forced because of extremely cold weather.

I advocate turning off all heat in the sleeping quarters during the night, and substituting for heat the use of plenty of covering. During the months when the sun is not strong ultra-violet therapy in the nose and on the

surface of the body will do much toward increasing the resistance of the patient.

The recognition of sinus disease of allergic origin is based upon clinical and histopathologic evidence. Allergic sinus diagnosis is made from the history, examination, skin tests, and the finding of eosinophiles in the nasal secretion. The finding of 10% or more of eosinophiles in the nasal secretion indicates allergy.

This form of rhinitis and sinusitis is a distinct clinical entity and requires allergic treatment, the most important of which are specific and non-specific protein therapy, ephedrin, and what I believe is the most promising of all, the ionization treatment.

Much has been written pro and con regarding dietary correction, particularly in children. The tendency, a few years ago, was to swing entirely toward the low carbohydrates and high vitamin containing diet. It has been my experience in going over the diet of some of my patients that most of them like certain foods, and eat these foods to the exclusion of a mixed diet, which is needed. By this I mean many people are great meat eaters, others consume quantities of potatoes, starches, and sweets, while others, particularly children, live on milk. All of these are good foods, but I feel that a well balanced diet including carbohydrates, protein, and fat in normal relation, with a sufficient intake of vitamin gives the greatest benefit. It is surprising when we see children who consume a quart or two of milk a day and not eating much of the mixed green vegetable diet and other mixed foods, show marked change for improvement when they are permitted one or two eight-ounce glasses of milk a day and are forced to eat the necessary foods to give the proper balance.

I believe that a little common sense in the amount of consumption of any single food must be urged by the physician upon the patient, so that the proper mixture will be attained.

Quite frequently we experience overweighted children showing definite hypopituitary and thyroid disturbance developing severe nasal infections. In these cases a low fat and carbohydrate diet is indicated until proper regulation of the endocrine glands can



be established through proper therapy. It is in this type of case that the low carbohydrate and fat intake gives a very marked and immediate improvement to the nasal and sinus condition.

We should realize that all sinus conditions do not come on acutely enough to give rise to marked sinus symptoms, and for this reason we are prone to overlook an extensive sinus involvement.

I think that it is safe to say that if an ordinary head cold persists for more than a week it is no more a rhinitis, but shows a residual sinus infection. If we could only realize this important fact and would direct active and energetic treatment toward clearing up this infection many of the chronic sinus cases would be prevented. In the cases showing frequent recurrences we should suspect residual infection in the sinuses and make every effort to clear them promptly.

In cases that have gone on for months and even years, we must be prepared and the patients and parents of the patients should be told that the treatment will be of long standing and will require a great deal of patience on their part and on the part of the physician. They should be told that the patients should carry out local and general treatment for periods varying from a few months to three or four years.

In conclusion, I repeat that early diagnosis, correction of nasal deformities, removal of tonsils and adenoids, proper hygiene, exercise but not to the point of exhaustion, proper diet, air-conditioning, treatment of allergic conditions, and persistent treatment constitutes a common sense regime to follow in the handling and prevention of sinus disease.

#### DISCUSSION

DR. E. R. MILLER (Wilmington): I was very much interested in some of the points which Dr. Mayerberg brought out. One is that every cold that persists over four or five days spells sinus disease, probably just a slight sinus infection of the congestive type, not necessarily of a purulent or muco-purulent type, which certainly should be thought of in any persistent cold, as well as colds which repeat themselves in patients. Those are the patients who come to you, saying, "Doctor, I

am getting cold after cold." In those cases I think the sinus condition should be thought of.

There are several points which I would like to bring out, which were not stressed. One is a chronic temperature or persistent temperature of low type, especially seen in children. I have had a number of cases of that type where the mother has a thermometer and discovers, if she takes the child's temperature several times a day, that probably in the afternoon about four or five o'clock the temperature will rise to 99, or 99½, or 100. Other foci of infection have been sought, for instance pyelitis, or evidence of tuberculosis, and the tuberculin test has been proven negative. Many times there will be a sinus condition that will be found to be the cause.

I recently had a case of that type, a child who had pneumonia about six months ago, and who kept running a temperature persistently, 99 and 99½. Upon x-ray examination of the sinuses, carefully done, it was found that there was an involvement of the ethmoids, with a slight bone necrosis, which undoubtedly was the causative factor of this child's temperature.

Then, again, sinuses are a cause of chronic bronchitis. Many patients will tell you, "I had bronchitis for so long. My father had it before me, and my grandfather. It runs in the family." I believe there should be a term adopted called sinus-bronchitis. In these persistent bronchitis cases, in which there are persistent rales over the base of the chest for a long period of time, which cure up very slowly under ordinary medication, in taking an x-ray many times this sinus condition is discovered. Usually I would prefer having the patient have an x-ray of the sinuses, rather than of the chest.

We have a patient in the Delaware Hospital from West Chester, who had been x-rayed up there, and the roentgenologist pronounced it tuberculosis, but the lesions were seen more at the hilus. On making further studies of this case, having the sinuses investigated, it was found she had a definite purulent infection, which I believe unquestionably is the source of this persistent productive cough.

Again, as the sinus condition is related to allergic disease, many times it is a mixed affair. The patients will tell you their allergy is worse in the fall, but when you do some tests with the ragweed or goldenrod on them they will always tell you that their asthma does not begin until after they develop a cold. Then on careful investigation by a nose and throat specialist or by x-ray examination, you will find there is an accompanying sinus condition. This means, of course, a close working together of the nose and throat man as well as the roentgenologist and the general practitioner. Certainly with these three working together in many cases of allergic disease and bronchitis the patient can be helped better and benefited than by each one trying to work alone.

DR. MAYERBERG: I am very glad that Dr. Miller brought out the points that he did. I made no attempt to cover the prophylaxis, feeling if we could attack the condition at the source we might eliminate some of these bronchial conditions by preventing chronic sinusitis. I might say we rarely ever find bronchial complications, chronic cough or the glandular involvement in the acute cases. It is usually after the acute stage has subsided, and they have gone on into the chronic stage where you begin to get these symptoms.

Frequently that afternoon temperature, Dr. Miller, is not caused so much by the infection in the sinuses after it has been of long standing. Usually if you look you will find some glandular involvement, probably in the cervical glands, which causes it. If your sinuses are chronic, there is more or less drainage, the mucosa is involved, and the infection there is not enough to give rise to acute symptoms, not enough to give rise to pain or even a temperature. You don't get signs of absorption in the general attitude of the patient, loss of appetite, and that sort of thing.

### **A PLEA FOR PROLONGED POSTNATAL CARE AND PERIODIC PELVIC EXAMINATION OF THE ADULT FEMALE**

C. L. HUDIBURG, M. D.  
Wilmington, Delaware

The postnatal period is the time following labor during which there is a disappearance

of those changes which occurred as a result of the pregnancy and the labor. Not many years ago pregnant women had never heard of medical care during the antenatal period. Members of our profession, realizing the importance of prenatal examination, have slowly educated the public until today almost all pregnant women know that they should report to their physician for observation and advice. It is now time for us to fall in line with our leading obstetricians and help to educate the public concerning the equally important postnatal care. It is the duty of the obstetrician, not only to successfully deliver his patient, but also to correct the pathological results of her pregnancy and labor so that she will be able to enjoy good health and not develop a debilitating condition due to the neglect of a trivial lesion.

The puerperium may be divided into three periods. The first is that which is strictly the lying-in period. The second extends to the time when the patient is able to resume her usual activities of life, averaging about four weeks. The third is the much neglected period of ten or twelve months when definite late pathologic conditions may develop and continue unobserved.<sup>1</sup> This paper does not deal with the first period, neither does it recommend any form of treatment for the defects mentioned. It is merely a plea for closer observation of the puerperal patient.

Women who have borne children seem predisposed to certain aggravating conditions which do not actually make them sick but which do cause an endless discomfort. Some women are predisposed to a distasis of the recti abdominalis muscles, with a resulting pendulous abdomen and a ptosis of the abdominal viscera. Backache is also a common complaint and frequently it is simply endured. Watson claims that the greater majority of women who consult gynecologists do so because of the pain and backache resulting from relaxed abdominal walls and an enteroptosis following pregnancy.<sup>1</sup> Evidence of trauma is found in practically all cervixes<sup>2</sup> after delivery, which later may result in an endocervicitis and an aggravating leukorrhea. Some women are predisposed to hernia of one type or another which pregnancy may precipi-

tate. In certain susceptible individuals varicose veins, hemorrhoids, coccygeal injuries, pendulous breasts, and endocrine disorders may be the result and may cause no end of trouble unless properly treated.

The lack of postnatal care may allow other minor conditions to develop into more or less serious complications. Frequently we find pathological lesions of which the patient is not cognizant, and she is entirely unaware of the approaching trouble. Certain of these lesions may produce a generalized effect on the entire system. We may find the cause of some constitutional symptom in a secondary anemia, in a defective posture, chronic constipation, ptosis of the breasts, an endocrine dysfunction with a marked gain in weight, or sometimes in such a simple defect as fallen arches or other foot troubles. Many cases of neurosis are born in the delivery room<sup>3</sup>. Sometimes it is a psychosis and such patients deserve the best psychiatric care. However, the obstetrician should not neglect his duty in helping to restore these women to a normal life.

We are all agreed that a focus of infection will have its general constitutional effect. A lacerated and eroded cervix with endocervicitis is a constant source of toxic absorption. Leavenworth<sup>4</sup> describes these patients as follows: "They complain of soreness, heaviness, and bearing down in the entire lower abdomen. There may or may not be a leukorrhea. Menstruation is often irregular and profuse. They suffer from weakness, lassitude and insomnia. There is usually backache, headache, and constipation. Pelvic examination reveals the cause of it all. Such lesions may also have a local effect on the bladder, producing an increased irritability with frequency, dysuria, and nocturia."

Perhaps the most frequent abnormal pelvic findings following labor is a subinvolution, a retrodisplacement, or an erosion of the cervix. Wilbanks<sup>1</sup> states that in general practice approximately 75 per cent of the patients seen at the usual six weeks examination have either a subinvolution, a retrodisplacement, an erosion of the cervix, or some bladder dysfunction. Parker<sup>5</sup> and Polak<sup>6</sup> agree that with adequate postnatal care the incidence of subin-

volution and retrodisplacement is markedly reduced. Barrett<sup>2</sup> reports that at the postnatal clinic at the Women's Hospital, examination of the cervix at the end of six weeks shows that 50 per cent of the women have cervical lesions which need treatment. If these lesions are not treated, there is an increased growth of the glandular epithelium, secondary infection and endocervicitis. These conditions are frequently responsible for persistent leukorrhea, pelvic pain, and sacral backache. Goodall<sup>7</sup> believes that a previously damaged and infected cervix is a frequent source of thrombophlebitis in subsequent pregnancies.

Local pelvic abnormalities following labor are accepted by the public and many members of our profession as the natural penalty of childbirth. Many times a physician accepts a relaxed pelvic floor, a cystocele, or a rectocele as a natural consequence of labor and no attempt is made to effect a repair. Many women think that it is the price which they must pay for their babies, but this is not true<sup>8</sup>, and such lesions should be repaired without undue delay. After the menopause, with an atrophy of the fundus uteri, a relaxation of the cardinal ligaments and a loss of tone in all the pelvic structures such lesions are accentuated. Findley<sup>9</sup> states that an uncomplicated retrodisplacement of the uterus is of clinical importance only in that to a limited degree it is a mechanical cause of sterility, and that it is the preliminary step in the development of a prolapsus. While the cause of procidentia is not a relaxed perineum, nevertheless, no postmenopausal woman will develop a prolapse if her cystocele, rectocele, and pelvic floor have been properly repaired.

The physiology of the female pelvic organs is manifested by the menstrual cycle, which begins at puberty and ends with the menopause. This cycle is normally interrupted only by a physiological pregnancy, following which we may find variations of oligomenorrhea, menorrhagia, or metrorrhagia. Either of the three is really a mild form of amenorrhea, and a persistent menstrual disturbance following pregnancy should be investigated. Barrett<sup>2</sup> is of the opinion that endocervicitis is frequently responsible for many cases of men-



strual irregularity and menorrhagia due to faulty postpartal involution of the uterus.

Perhaps the most important reason why postnatal lesions of the cervix should be cured in cancer prevention. Horsley<sup>10</sup> says "the important thing in the treatment of cancer is not to search for new cures, but to search for new methods of early diagnosis, so that the efficient well known cures can be properly applied." Bloodgood<sup>11</sup> states that cancer of the cervix is a preventable disease, and its prevention depends upon examinations at regular intervals. Cancer never begins as cancer. First a group of normal cells is changed to abnormal cells which produce a visible, palpable spot on the cervix. Proper treatment in this early stage, even though the cells are cancerous, accomplishes a cure in almost every case. Crossen<sup>12</sup> is of the opinion that cancer of the cervix comes from long continued irritation in the form of endocervicitis, usually accompanied by lacerations, erosions, and cystic changes. C. Jeff Miller<sup>13</sup> states that there is no doubt that endocervicitis is a condition to which the much abused word "pre-cancerous" may be truly applied. Culbertson<sup>14</sup> has called attention to certain types of erosion showing extensive proliferation of cells, which clearly places the disease on the borderline of malignancy. Norris<sup>15</sup> mentions 1,247 patients treated for chronic cervical erosions in only one of whom cancer of the cervix is known to have developed. It is dangerous to allow any irritation of the cervix to persist, and all suspicious lesions should be treated with the greatest of respect. One of our chief modes of reducing the incidence of cancer is adequate postnatal care of every puerperal patient.

Additional abnormal possibilities have to be kept in mind following a pathological labor. The sequelae of the toxemias of pregnancy are not so benign as was formerly believed. L. Sietz<sup>16</sup> recently reports that the bilirubin test and the levulose test following eclampsia show that liver function is impaired and that lasting damage has been done. Every woman who has had a toxemia during pregnancy must be re-examined not only until the albumen and casts have disappeared but until repeated examinations prove that they have disappeared. Peckham and Stout<sup>17</sup> found that in a large follow-up series of toxemic patients

40 per cent had a definite chronic nephritis. Harris<sup>18</sup>, and Young<sup>19</sup> have obtained similar results, although frequently the evidence consists only of an elevated blood pressure. It is safe to say that toxemic patients are prone to develop vascular hypertension which may continue as such after pregnancy<sup>20</sup>.

A patient who has had a pyelitis or cystitis during pregnancy or early puerperium will need treatment and observation for months. It is important to treat such lesions until every vestige of the infection has disappeared.

The remote results of a puerperal infection may be found for years after the patient has apparently recovered. A subacute bacterial endocarditis or a chronic nephritis are common lesions following a septicemia. All evidence of such an infection must have disappeared before a patient's postnatal care is terminated.

The importance of treating a secondary anemia following postpartum hemorrhage should be evident. A lot has been said as to how a puerperal patient may recover from hemorrhage, but many times we are content with saving her life and not anxious enough about her general health<sup>3</sup>. The excessive loss of blood during labor is an important factor and the resulting anemia is sometimes the cause of invalidism. Kersley and Mitchell<sup>21</sup> name five types of anemias of pregnancy. The common microcytic type, the more rare megalocytic or pernicious type, anemia due to blood loss, anemia due to hemolysis following sepsis, and the rare acute idiopathic hemolytic anemia of pregnancy. They should all be kept in mind when a postnatal case returns to us with a pale and sallow complexion.

Pregnancy and labor leave their mark upon practically every mother, occasionally the gynecologist sees a woman who has borne children in whom he is unable to find any definite evidence of ever having been pregnant. Such cases are rare. At least 50 per cent of puerperal patients have major or minor symptoms or signs which actually need treatment. Nicoll and Marsh<sup>22</sup> report 42 per cent of the women in their postnatal followup clinic showed abnormal pelvic findings.

In the same manner, pelvic examination of the normal adult female at regular intervals

reveals lesions that were not suspected. Major General Ireland<sup>23</sup> instituted a routine examination of officers' wives, and from March, 1931 to June, 1932, 6,917 were examined. Of these, 36 were found to have positive malignancies of the pelvic organs, and 10 others had suspected malignancies. In the Third Corps Area alone 832 apparently normal women were examined with the following results: 222 had pelvic defects needing treatment, 16 had benign lesions which were "pre-cancerous," and three had definite carcinomata. C. Jeff Miller<sup>8</sup> struck the keynote of preventive gynecology when he admitted that his "surgical practice would be cut in half if there could be eliminated from it the preventive gynecologic complications of obstetrics," and that 50 per cent of the women who go to his office go there for "diseases which could have been aborted in their incipency."

If for no other reason, prolonged postnatal care is desirable even after normal labors because the pelvic findings usually change from time to time. A patient in good health and with no abnormal findings at the end of six or eight weeks may, on examination when the baby is six months of age, present surprising pelvic changes.

When the public is educated concerning the necessity of prolonged postnatal care, woman will demand it for the mere satisfaction of knowing that she is perfectly normal and the assurance that she will not develop malignant changes. The obstetrician will have the advantage of keeping in touch with his patients and preventing misunderstanding, but most of all, he will observe his mistakes so that they need not be repeated, and will be encouraged to continue with the procedures which gave him best results.

#### BIBLIOGRAPHY

1. Wilbanks, M. L.: Abnormal Sequelae in the Puerperium, *Tex. S. J. M.* 29: 378, Oct. 1933.
2. Barrett, R. L.: Electrocoagulation of Cervical Erosions and Endocervicitis in the Late Puerperium, *J. A. M. A.* 103: 1517, Nov. 1934.
3. Litzberg, J. C.: Postnatal Supervision, *Neb. S. M. J.* 18: 467, Dec. 1933.
4. Leavenworth, L. E.: The Postpartum Cervix, *Ohio S. M. J.* 26: 507, June, 1930.
5. Parker, M.: Postnatal Maternal Care, *J. A. M. A.* 89: 2083, Dec. 1927.
6. Polak, J. O.: Details of Postpartum Care, *Amer. J. Ob. & Gyn.* 13: 432, April, 1927.
7. Goodall, J. R. and Wiseman, M.: Cervical Infections in the Puerperium, *Amer. J. Ob. & Gyn.* 16: 339, Sept., 1928.
8. Miller, C. Jeff: Gynecologic Backwash of Obstetrics, *Sou. Sur.* 1: 301, Jan., 1933.
9. Findley, Palmer: Frequency and Clinical Significance of Displacements of the Uterus, *J. A. M. A.* 79: 795, Sept., 1922.
10. Horsley, J. S.: Cancer Cures, *Bull. Am. Soc. Control Cancer*, 16: 11, Dec., 1934.
11. Bloodgood, J. C.: The Postnatal Clinic, *Amer. Med.* 39: 249, June, 1933.
12. Crossen, H. S.: Prevention of Cancer of Cervix Uteri, *Amer. J. Ob. & Gyn.* 26: 686, Nov. 1933.
13. Miller, C. Jeff: Management of Chronic Endocervicitis, *Surg. Gyn. & Ob.* 46: 337, Feb., 1928.
14. Culbertson, Carey: Erosion of Cervix Uteri. Causes, Developments, and Results, *J. A. M. A.* 87: 1808, Nov., 1926.
15. Norris, C. C. in discussion on Crossen, 12.
16. Seitz, L.: Question of Advisability of Conception after Eclampsia, *Internat. Med. Dig.* 26: 21, Jan., 1935.
17. Peckham, C. H. and Stout, M. L.: Study of Late Effects of Toxemias of Pregnancy, *Bull. Johns Hopkins Hosp.* 49: 225, Oct., 1931.
18. Harris, J. W.: After Effects of Late Toxemias of Pregnancy, *Bull. Johns Hopkins Hosp.* 35: 103, April, 1924.
19. Young, James: Prognosis and Treatment of Eclampsia and Albuminuria, *Brit. M. J.* 1: 91, Jan., 1929.
20. Hurwitz, David: Toxemias of Pregnancy, *New Eng. J. M.* 209: 1281, Dec., 1933.
21. Kersley, G. D. and Mitchell, D. A.: Anemias of Pregnancy, *Brit. M. J.* 2: 720, Oct., 1934.
22. Nicoll, M., Jr., and Marsh, E. H.: Report of 218 Completed Cases at Westchester County Prenatal Clinic, *N. Y. S. J. M.* 32: 1180, Oct., 1932.
23. Ireland, Major General: War Department, Circ. No. 25, Mar. 11, 1931.

#### Can The Leopard Change Its Spots?

The "patent medicine" interests have decided that another housecleaning is called for. History repeats itself! Nearly thirty years ago, when the present National Food and Drugs Act was under consideration in Congress, the "patent medicine" people, through their publicity department, let it be known that all members of the "Proprietary Association of America"—as the organized "patent medicine" business was then called—would conform to certain rules of truthfulness and decency in advertising their wares. Unfortunately, the list of members of the Proprietary Association of America was never made public! About a year ago—in August 1934—there was published in the *Editor and Publisher* an article entitled "Proprietary Association Begins Clean-Up." In this it was stated that the Proprietary Association—the present name for the organized "patent medicine" interests—had created an Advisory Committee on Advertising, which would draw up an "Outline of Ethical Practices in Proprietary Advertising." In June of this year the *New York Times* reported that the Proprietary Association was about to "launch a comprehensive program of research." The function of this "Research Committee," it appears, is to gather evidence to rebut any damaging attacks on "patent medicines." The same article in the *Times* stated that Dr. Frederick J. Cullen, general representative of the Proprietary Association, was also serving, ex-officio, as secretary. Dr. Cullen, as the *Times* pointed out, was formerly Chief of Drug Control of the Department of Agricul-



ture. There has recently been issued (Aug. 28, 1935) what is presumably one of the first pieces of work in this field. In April 1933 the Department of Agriculture issued under Dr. Cullen's name a bulletin warning the public against the coated laxatives that contain phenolphthalein. The bulletin was a straightforward, valuable statement of fact, pointing out the potential dangers of phenolphthalein when used indiscriminately by the public in the form of "patent medicines" put up as "pressed fruits, mints, small cubes or lozenges" and "packaged attractively." Now (Aug. 28, 1935) the Proprietary Association, under Dr. Cullen's name, sends Bulletin 6365 to all its members. In this bulletin Dr. Cullen completely reverses himself on phenolphthalein. In it he states that the government bulletin (April 1933) issued by him was based on information gathered from medical textbooks and from a report made by a physician in one of the medical journals (the report of the case of a small child who ate a complete box of the "candy laxative" known as "Ex-Lax" and promptly died). It appears that Dr. Cullen today, in his connection with the "patent medicine" interests, has decided, "a more exhaustive study of the effects of phenolphthalein since the issuance of that article, (April 1933) has resulted in a change in my opinion as to its harmful effects." This "exhaustive study" seems to have exhausted the doctor's judgment; one wonders where he found the new evidence on which the reversal of his opinion was based. Have new controlled studies been reported to warrant such a remarkable change of front or is there just a new job? Undoubtedly the "patent medicine" interests are on the defensive and presumably will spare no expense to convince a gullible public that its business is a public-spirited activity. But those who have followed critically the devious methods of the "patent medicine" business for more than a quarter of a century may be excused for hold-

ing to the well-established opinion that the leopard does not change its spots.—Editorial *J. A. M. A.*, Sept. 21, 1935.

### Re: Bonine

Rex Beach Writes Up Bonine.—A recent issue of *Cosmopolitan* magazine carries an article by Mr. Rex Beach concerning the qualities of Dr. F. N. Bonine of Niles, Michigan, as a "famous benefactor of the blind" and a "Modern Miracle Man." In association with this article, *Cosmopolitan* magazine announces that "This article reflects the impressions of the author, and we publish it for its human interest value and not as carrying an endorsement." Dr. Bonine has apparently for years been doing a large business under the claim of dissolving cataract. Great numbers of people come to see him. They are charged \$2 for the first visit and \$1 for subsequent visits. The doctor practices in his shirt sleeves and the "miracles" are performed under circumstances which are calculated to impress by their simplicity. The usual method of treatment for patients with cataract is the prescription of eye-drops which consist largely of boric acid and sodium salicylate in witch hazel water. There is not the slightest scientific basis for the claim that any cataract is benefited or removed by putting such drops in the eyes. Mr. Rex Beach and the *Cosmopolitan* are not rendering a service to mankind by their exploitation of so-called miracle men. They may cause a considerable number of sick people to spend money for transportation which might very well be spent in securing good medical care at the hands of competent physicians. Mr. Beach is himself hardly sufficiently trained in scientific medicine to have the slightest comprehension of the significance of testimonials or of the enthusiastic utterances of neighbors and friends in the villages which depend on the "miracle men" for such business as comes to them.—(*J. A. M. A.*, September 28, 1935).



# EDITORIAL

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W. EDWIN BIRD, M. D. .... EDITOR

Du Pont Building, Wilmington, Del.

WILLIAM H. SPEER, M. D. .... Associate Editor  
917 Washington St., Wilmington, Del.

M. A. TARUMIANZ, M. D. .... Associate Editor & Bus. Mgr.  
Du Pont Building, Wilmington, Del.  
Telephone, Wilmington, 4368

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### NEW CLINICS AND THE PROFESSION

The recent annual session of the Medical Society of Delaware was a very successful and instructive one, professionally. The routine business of the Society was, as usual, transacted by the House of Delegates, and was disposed of with neatness and dispatch. There was but one fly in the ointment—the published announcement of a new so-called "Well Baby Clinic" in Wilmington's Ninth Ward, under the auspices, at least in part, of the State Board of Health. Immediate and severe were the criticisms of this proposal: let us examine these.

1. At a special meeting of the House of Delegates, held in Dover in 1933, a resolution was adopted unanimously to the effect that this Society was opposed to the opening

of any more clinics in this State. The secretary of the State Board of Health attended this meeting and publicly concurred in the resolution, stating that he agreed that the clinics already established were sufficient for our needs for many years to come, and adding that, so far as the State Board of Health was concerned, he was gratified that the Society had taken definite action and pledged his support to that action. In the face of these categorical assertions, the Medical Society found it difficult to understand the published proposal concerning the Ninth Ward.

2. There is no need or demand, aside from a few specially interested persons, for such a clinic. The distance to the nearest similar clinic is not great; furthermore, if one day is inclement another day will do just as well, for are not these clinics "Well baby clinics"? It is our understanding that this new clinic was originally proposed by a young physician only recently admitted to the Medical Society who advanced this proposition without serious study and without consulting the Medical Society, another instance of the youngster telling his more experienced Daddy what to do and how to do it.

3. Our experience with the similar clinics already established is that they are abused. Many of the parents who patronize these clinics for their baby want nothing less than a private physician for their own guidance, and they pay for it. Why should not this same class, able to pay, take the baby to a private physician for guidance?

4. Conversely, the physician at the clinic gives "directions as to diet, clothing, cod liver oil, etc.," and thus converts the clinic from a weighing and measuring station into a treatment clinic. As a scientific thesis, we maintain—and we defy refutation—that the *only* place for a *treatment* clinic, aside from tuberculous and psychiatric patients, is a general hospital, with its co-ordinated departments, modern equipment, laboratory facilities, and the ability to put the patient to bed should that be advisable. From the standpoint of economics, no informed man of in-

telligence argues for a lot of little pee-wee stations or so-called clinics, each with its own overhead expenses to be met somehow, as compared with the centralized and thus reduced overhead of the hospital: the latter plan is common sense, which does not seem to be common at all; the former scheme is economic waste, which in these hard times is akin to crime.

5. If and when this city grows large enough to need more charity *treatment* facilities, such facilities will be provided by new hospitals at strategic points, or else by branches of the present hospitals, similar to those in Boston. This community has enough brains and enough money to provide for such needs, and when the time for expansion comes the medical profession, as always, will be the first to point out the need, plan the necessary details, and then make an appeal for the funds required. And it will do this, not as an individual effort, but as the concerted action of a highly-educated profession.

To return to the Ninth Ward proposal. The matter was referred to the Committee on Medical Economics, and within twenty-four hours an understanding was reached with the State Board of Health, wherein the proposed new clinic was abandoned as unnecessary, and the possibility of moving the present clinic in that ward to some point nearer that proposed for the new one was discussed. This latter idea has considerable merit, and should it materialize it would tend to heal some sore spots that need healing. To further the proper accord between Board and Society, the Board agreed to propose no clinic in the future without proper conference with the Society.

This is as it should be. In several states open warfare has broken out between the State Board and the profession, due to the aggressive or socialistic trend of certain of the boards. In such battles, generally the profession wins. Here in Delaware the State Board and its secretary have played a pretty clean game of ball with the physicians, and it is our earnest desire that this cordial co-operation shall continue with no untoward incidents to mar the existing relations.

The functions of a State Board of Health are quite definite and consist of:

1. The collection of vital statistics.
2. The control of sanitation.
3. The control of water, milk and food supplies.
4. The control of communicable diseases.
5. The maintenance of a laboratory service.
6. Public health instruction.

It is to be noted that the *treatment* of disease is not a proper function of the Board, yet, because of the social and economic problems involved, by common consent tuberculosis and insanity are treated by officials of the state. Aside from these, the setting up of a clinic, center or station wherein *any* diagnosis is made or *any* treatment is outlined or given is a plain usurpation of the right to practice medicine, and is a frank violation of the Constitution, as the United States Supreme Court has already decreed that neither the Congress nor the separate states have the right to practice medicine, and on this constitutional guarantee we propose to stand.

The medical profession is *the* altruistic one, and rash indeed is he who charges us with selfishness. Charity seems to be our middle name, and the \$350,000,000 donated to the poor by the profession last year is a sum not matched by all the millionaires in America put together, nor by any other class of citizens. We do not say this to boast: in fact we deplore that the manufacturing man, the agricultural man, the commercial man, and all the others in the realm of business have made such a mess of things that the doctors are called upon to make an annual contribution of \$350,000,000!

Bearing in mind this unequalled generosity, the medical profession is to be commended for reserving to itself the final decision as to when and where charity clinics shall be set up, for after all, it is the doctors who have to run them, do the work, assume the legal liability, catch the hell, and accept less than thanks for pay. Even so, the Medical Society of Delaware will continue its 146-year-old service to the public "with malice towards none, with charity for all"—that is, for all who really deserve it.



## M. S. of D.: 1936

The newly-elected officers for next year are:

*President* . . . . . J. B. WAPLES, Georgetown  
*First Vice-Pres.* . . M. I. SAMUEL, Wilmington  
*Second Vice-Pres.*, C. G. HARMONSON, Smyrna  
*Secretary* . . . . . W. H. SPEER, Wilmington  
*Treasurer* . . . . . A. L. HECK, Wilmington  
*Councilor* . . . . . J. D. NILES, Townsend

The 146th Annual Session, held at Wilmington, October 7-9, 1935, was a great success. The papers were excellent, the discussions were intelligent, and the attendance probably set a new high record. The total was 142; omitting the 12 guests, the 130 members who registered constituted 70% of our 185 members. The social features were also very enjoyable.

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**WOMAN'S AUXILIARY**

Mrs. Lawrence J. Jones, of Wilmington, was elected president of the Woman's Auxiliary to the Medical Society of Delaware at their annual meeting held on October 9th, at the Hotel Du Pont, in conjunction with the meeting of the Medical Society. Mrs. Jones succeeds Mrs. Joseph S. McDaniel, of Dover.

Other officers chosen were Mrs. Willard E. Smith, Wilmington, vice-president for New Castle County; Mrs. I. W. Mayerberg, Dover, vice-president for Kent County; Mrs. Irving Stambough, Lewes, vice-president for Sussex County; Mrs. Ira Burns, recording secretary; Mrs. Sylvester Rennie, Wilmington, corresponding secretary, and Mrs. Willard F. Preston, Wilmington, treasurer.

Mrs. Prentice Wilson of Washington, D. C., president of the Woman's Auxiliary of the Medical Society of the District of Columbia, and now an officer of the National Auxiliary, was a guest speaker. She told of the work done by the Washington Auxiliary. She also spoke of the interest of that Auxiliary in securing silent motion pictures to be shown to the very deaf persons.

Mrs. McDaniel presided over the session, which was attended by about thirty members from all parts of the state. Reports were given by various officers and chairmen.

Mrs. Robert W. Tomlinson, a former president of the Auxiliary, and immediate past

president of the National Auxiliary, thanked members of the Delaware Auxiliary for their co-operation during her term as national president. She urged the Auxiliary members to remember that the Auxiliary was formed as an organization to help the Medical Society and to look to the Medical Society for guidance in their work.

Flowers were presented to Mrs. McDaniel and Mrs. Wilson from the Auxiliary by Mrs. Buckmaster.

A luncheon with members of the Medical Society at 1 o'clock brought the meeting to a close.

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**MISCELLANEOUS****Active Immunization Against Poliomyelitis**

Maurice Brodie and William H. Park, New York (*Journal A. M. A.*, Oct. 5, 1935), state that since individuals who have recovered from one attack of poliomyelitis rarely if ever are subject to a second one, there appears to be some basis for the belief that active immunization can be effective. Moreover, both convalescent human beings and monkeys usually have demonstrable antibody. They have found the antibody content higher following a severe attack as compared with that produced by a mild attack in the experimental animal, and likewise animals recovered from a severe attack show a much greater resistance to reinfection. Since there is some correlation between concentration of antibody and immunity, the former can be used as an index of immunity in immunization experiments. In monkeys, owing to a lack of exposure to the virus, there is no antibody at any age, but in human beings there is increased antibody with aging. The authors' report deals with the immunization of human beings and monkeys with an antigenic and innocuous vaccine and with tests performed to determine the degree of this immunity. Experiments in monkeys indicated that immunity could be developed by the injection of virus treated with solution of formaldehyde and that the vaccine was noninfective. Inoculation of this material into several human volunteers having shown that it was probably safe for human administration, it was used in children. The vaccine was given in either



one or two doses, each 5 cc. in amount, of which from 1 to 2 cc. was injected intracutaneously and the remainder subcutaneously. In more than 2,300 vaccinations there have been only three general reactions and twenty-three appreciable local reactions, such as superficial necrosis or marked induration. About one-third of those vaccinated showed a moderate induration, which lasted for a week or two. About seventy-five children have been tested for antibody both before and after immunization. The results up to the present show that, with a single 5 cc. dose, antibody was produced in twenty-two of twenty-six children and that with two such doses ten out of ten responded. The serums of the majority of the children immunized had little or no antibody before immunization, while a few had considerable neutralizing power. Although the proportion of those immunized and the height of antibody level is greater when antibody is present before vaccination, yet in the absence of any previous antibody in the small series, nine out of twelve developed antibody. For use in epidemics it is important that the administration should be followed by the rapid production of immunity. Were a simple test for antibody available to enable the selection of those requiring the vaccine and also to determine the results of immunization, it would be possible to limit the number of vaccinations.

---

### Acute Empyema In Children

While his paper deals with empyema in children, J. M. Mason, Birmingham, Ala. (*Journal A. M. A.*, Oct. 5, 1935) presents it with the somewhat paradoxical purpose of maintaining that the same rules should govern the treatment of the disease whether in children or in adults. The general plan of treatment that he has formulated and some of the details that he has found important are as follows: 1. After a physical examination roentgenograms are made in every suspicious case. 2. Aspiration is performed and is repeated as often as indicated in order to decompress the lung, to ascertain the character of the effusion, to determine the infecting organism and to make certain that the patient is not subjected to operation until the proper

stage has been reached. Following aspiration the patient is observed frequently to see if any curative tendencies can be detected. 3. Resection of a rib with drainage by tube is carried out under local anesthesia unless there is some special reason for the use of a general anesthetic. 4. The tube should be of large caliber, placed at the most dependent part of the cavity. It should be so fixed to the edge of the wound that it will neither slip into nor out of the empyema cavity. 5. Following the operation the wound is covered with a large dressing of sterile gauze and this is changed as often as it becomes soiled. After the first forty-eight hours a change will rarely be necessitated oftener than once a day. 6. Irrigations are not employed in the postoperative treatment unless some special indication is noted. 7. The original tube may remain undisturbed for from seven to ten days; after that it should be changed daily, and its length and diameter diminished to conform to the needs of the lessening size of the abscess cavity. The progress of obliteration can be well observed by the frequent use of the x-rays. 8. Any sudden rise in temperature in a convalescent patient demands prompt investigation of the drainage tract. If no obstruction is found, diligent search should be made to ascertain the source of the trouble. In children this will often be found in the intestinal canal or in the middle ear. If a rise of temperature occurs after the removal of the drainage tube, it usually indicates that the tube has been removed too early and must be replaced unless some other definite cause for the rise can be discovered. When a pleural abscess has been drained and the temperature does not show a definite tendency to subside, other areas of encysted empyema should be sought for, since recovery will be delayed until each pocket has been drained. The author employed the foregoing plan of treatment in the forty patients who were under his personal charge, with only one death.

## BOOK REVIEWS

The Sexual Relations of Mankind. By Paolo Mantegazza, M. D., one-time Professor of Pathology, University of Pavia. Translated from the Eleventh Italian Edition. Pp. 335. Cloth. Price, \$3.00. New York: Eugenics Publishing Company, 1935.

Professor Mantegazza (1831-1910) wrote this work originally in 1885, as part of a trilogy on sexology, in which field he was a notable pioneer. Apparently the main reasons for this 1935 edition are the facts that this is an unexpurgated translation and that it preserves in English one of the famous source-books on this subject. When one considers that fifty years ago this field was taboo one can begin to appreciate the knowledge and temerity of the author. The title is sufficiently descriptive to the present-day reader. The text is remarkable in its world-wide citations. The only serious defect is the absence of an index. To one who would complete his library on this subject the present volume is indispensable.

A Marriage Manual. By Hannah M. Stone, M. D., and Abraham Stone, M. D. Pp. 334, with 8 illustrations. Cloth. Price, \$2.50. New York: Simon and Schuster, 1935.

This volume, in question and answer form, represents a clinical experience of over 10,000 cases. Intended for the newly-wedded, or those about to be, this is a non-technical exposition of the marital relations that is authoritative, sensible, modest, and completely up-to-date. This Manual is distinctly one of the best on this subject.

Instructions to Physicians and Hospitals for Submitting Charges in Federal Injury Cases. By C. B. Riddle. Pp. 4. Paper. Price, \$1.00. Washington: C. B. Riddle, 1935.

This little booklet is an abstract of the regulations of the U. S. Employees' Compensation Commission's regulations which govern the classified services under the U. S. E. C. C. and the unclassified services under the WPA. Written by a former supervising auditor of the U. S. E. C. C., it is worth a dollar of any physician's money who expects to treat patients under the WPA—as, when, and if said WPA ever gets down to brass tacks.



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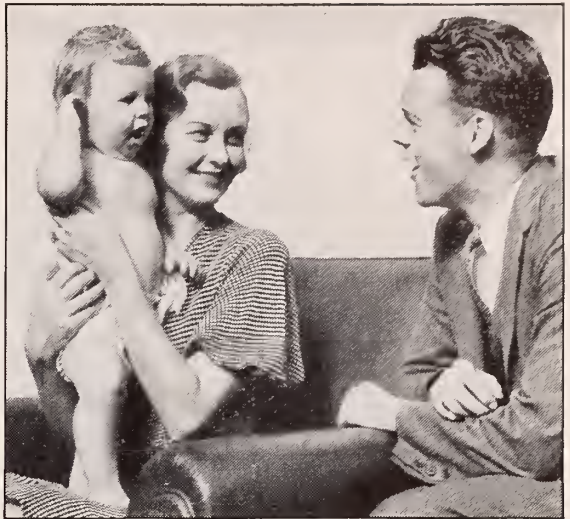
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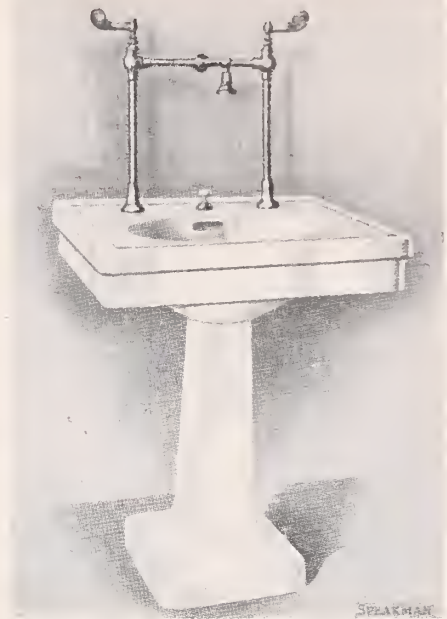
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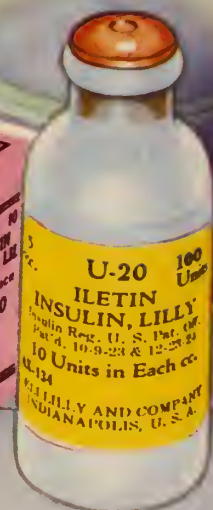
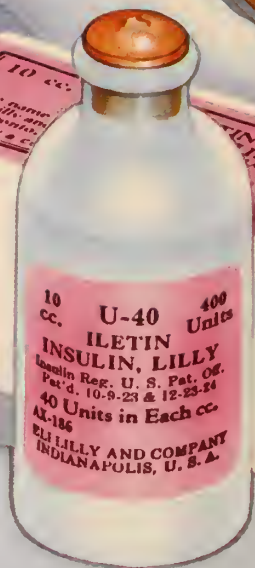


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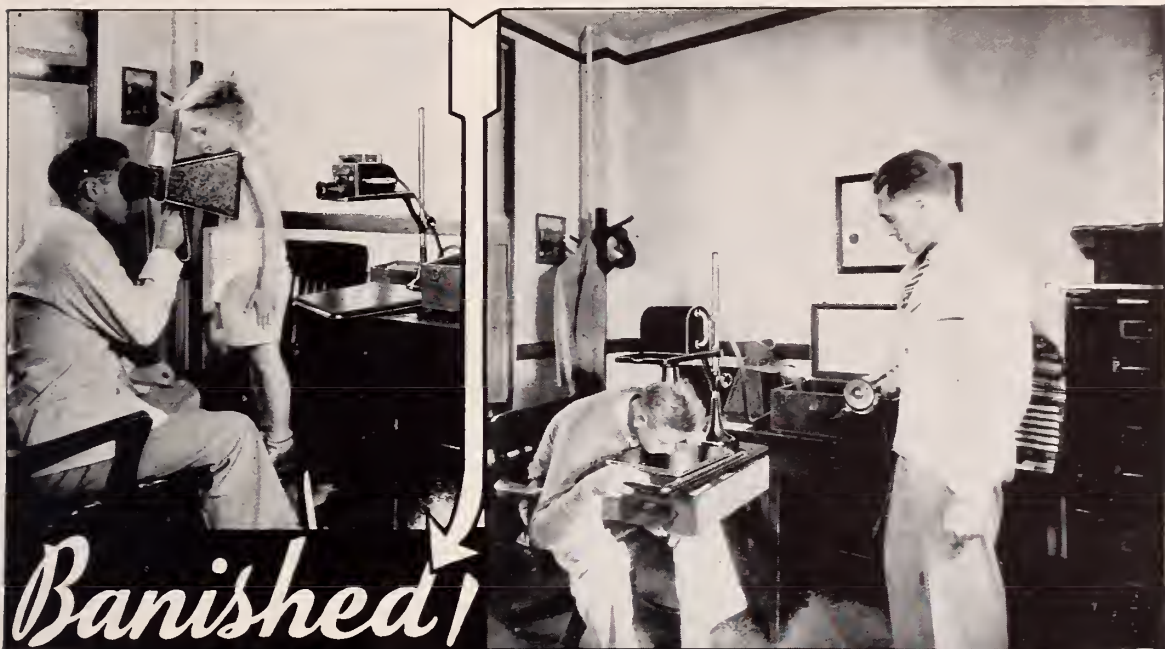


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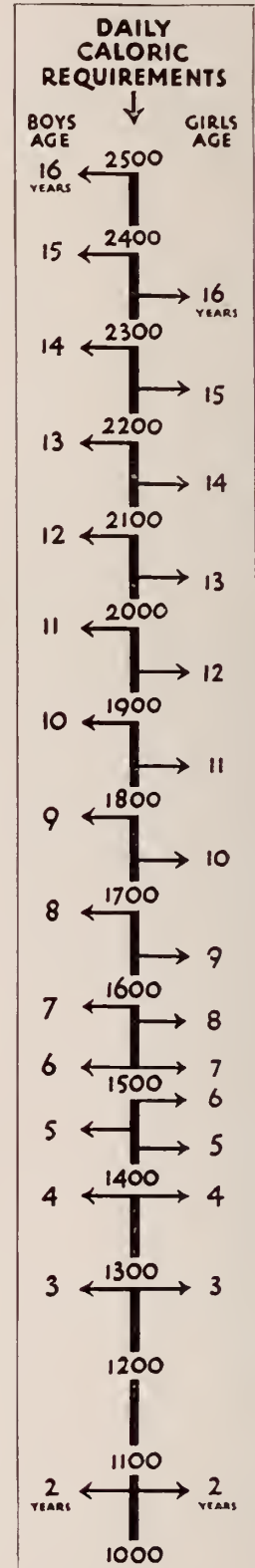
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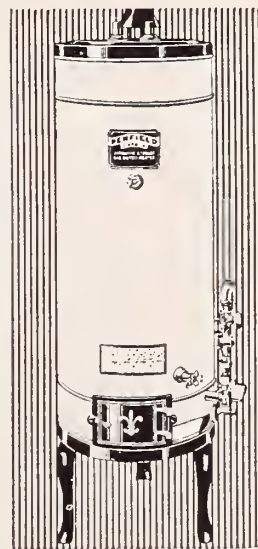
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## SPECIFIC ANTI-SERUM IN THE TREATMENT OF TULAREMIA

### Two Unusual Cases Treated Successfully With Commercial Anti-Serum

LEWIS B. FLINN, M. D.  
Wilmington, Del.

Wherry and Lamb<sup>1</sup> in 1914 first reported infection of man with bacterium tularensis and showed that the most common source of such infection in this country is the wild rabbit. Tularemia may also be contracted from other rodents and possibly also through the medium of such insects as the tick. The Middle West, Texas and Virginia have a particularly high incidence of infection. The first case reported in Delaware was by Dr. C. L. Hudiburg in 1931. This was a mild case which recovered promptly and was not published. The two cases here reported bring the Delaware total to three and so far as can be ascertained are the first ever to be treated with a commercially prepared specific anti-serum. Foshay<sup>2, 3</sup> first prepared an anti-serum from goats and more recently from horses. The serum used in the present report was prepared by Sharp and Dohme by immunizing a horse according to the method of and in collaboration with Foshay. The latter reported 15 serum-treated cases in 1933 and 69 in 1934. Since then the total treated by him has risen to 240. The mortality rate of this disease is only about 5-7%, but the average time of incapacity from the prolonged fever, abscesses, pulmonary and other complications is four and one-fourth months. Even the milder cases without late recurring abscesses take a number of weeks before returning to their occupation. The serum treatment shortens this time of incapacity by 50%, greatly reduces the amount of suffering, rapidly heals the ulcerated lesions and also

seems to prevent late tularemic sepsis, which is the usual cause of death.

#### CASE 1

C. S. Ulcero-glandular type. Male. Age 21. Family history and past history unimportant. Rheumatic fever five years previously.

#### *Present Illness:*

11/15/34. Rescued a rabbit from a dog while hunting and noticed sores behind the rabbit's ears. Previously had had an open abrasion on the index finger of right hand.

11/18/34. Awakened early in the morning with headache, fever, followed by a chill, severe prostration and delirium.

11/19/34. Patient was admitted to the Delaware Hospital and on examination nothing of importance was found aside from the severe prostration, very slight cyanosis, moderate delirium, some tympanites. White blood count 14,900; 79% P. M. N. Urinalysis was negative. The white count gradually fell to 10,000 without change in hemoglobin or erythrocytes. Temperature ranged from 100 to 103.

11/23/34. The abrasion on the index finger of the right hand which had been present for ten days before the exposure to the rabbit became very sore and indurated in the manner characteristic of tularemia. Lymphangitis followed with tender, swollen and palpably enlarged axillary lymph nodes on the left side.

11/27/34. The patient was generally improved. Temperature lower. History of rabbit contact was obtained for the first time. Blood serum on this date gave positive agglutination with B. tularensis in a titer 1:10. This was the 7th day of the disease.

12/7/34. The 17th day of disease. Blood serum gave positive agglutination for B. tularensis in a titer 1:640.



12 8/34. Patient's general condition was greatly improved. The temperature which had been staying between 99 and 100 now arose to 103, with an increase in the size of the axillary nodes and the appearance of several firm knots along the lymph channel of the upper right arm. 15 cc of anti-tularemic serum (Sharp and Dohme) was given intravenously.

12 9/34. 15 cc of serum was again given. X-ray of the chest was negative.

12 11/34. Temperature became normal and remained so thereafter. A rapid convalescence followed.

12 17/34. An abscess on one of the lymph channel knots of the upper right arm was opened. Prompt healing followed and the patient remained well thereafter.

#### COMMENT

In Case 1 no serum was available until the 18th day. At this time the temperature was rising and local signs of beginning suppuration in the right axilla were marked. The prompt subsidence of fever and the rapid healing of the skin lesions following the serum are convincing proof of its effectiveness. An abscess of a lymph nodule into which ran a cord-like lymph channel, with many "knots" was opened one week after discharge from the hospital and healed promptly. This patient was well six weeks after the onset of illness.

#### CASE 2

C. H. S. Tularemic pneumonia. Age 58. A Magistrate. Father of Case 1. Family history and past history unimportant except that a benign papilloma was removed from beneath the tongue in 1929.

#### Present Illness:

11 15/34. Skinned a rabbit which had been previously handled by son.

11 22/34. Sudden onset of chill, followed by fever. Extreme prostration and mild delirium. Patient still has no recollection of anything occurring for three weeks following this initial chill.

11 29/34. Patient was admitted to the Delaware Hospital, where examination revealed a few fine rales at both bases posteriorly; slight dullness; diminished breath sounds over part of the right lower lobe posteriorly. The cough was severe but there was no

marked dyspnea. Several ulcers appeared beneath the tongue and inside the lower lip. One in particular seemed deeper than the others and became markedly indurated. There were upper and lower dentures. No skin lesions appeared except those of a long standing psoriasis.

12 4/34. Temperature continued irregularly to 105. Respiration 24. Physical signs in chest unchanged. A roentgenogram revealed evidence of broncho-pneumonia on both sides (Figure 1), W. B. C. 10,000-18,000, with about 76% P. M. N. Smear from the mouth was negative for Vincent's organisms. Urinalyses were consistently negative except



FIGURE 1—Roentgenogram of chest in Case 2, made with bedside unit, showing tularemic infiltration in both lungs, more marked on the right side.

for a trace of albumin and a few hyaline casts. Hemoglobin 78% (Dare). R. B. C. 4, 30,000. Blood culture was negative. Blood serum gave complete agglutination of B. tularensis 1:80 on the 12th day of disease.

12 6/34. 10 cc. of anti-tularemic serum (Sharp & Dohme) prepared by the method of Foshay was given intravenously. No serum was obtainable sooner.

12 7/34. 15 cc. of anti-tularemic serum was given.

12 8/34. 20 cc. of anti-tularemic serum was given.

12 9/34. 15 cc. of anti-tularemic serum was given.

12 11/34. 15 cc. of anti-tularemic serum was given. There had been no reaction from the serum and also no definite improvement.

12/12/34. A final dose of 15 cc. was given on this date, making a total of 90 cc., which was 24 cc. more than had been given in any previously reported case.

12/16/34. Clinically much improved in spite of continued low fever.

12/20/34. Physical signs on examination of chest were definitely improved. The ulcers beneath the tongue were healed.

1/20/35. The patient had gradually become stronger and on this date was discharged from the hospital.

2/25/35. Continued convalescence at home and returned to work on this date.

4/23/35. Following excessive outdoor physical exercise patient developed pleuritic pains.

5/20/35. During the previous three to four weeks there were several attacks of pleurisy with and without fever.

5/25/35. Fluid aspirated from the left pleural cavity gave an agglutination titer for *B. tularensis* of 1:320.

6/21/35. Through the kindness of Dr. Foshay anti-tularemic goat serum was given intravenously in 15 cc. doses on two consecutive days. This serum was used instead of administering more of the serum prepared from horses in order to avoid any possibility of hypersensitivity due to the previous large dose of the commercial serum. There followed cessation of all symptoms and the patient has remained perfectly well.

#### COMMENT

It has only been within the last few years that cases have been reported under the term "tularemic pneumonia." The pneumonia in the earlier reported cases was thought to be secondary. Parmer and MacLachlan<sup>4</sup> described in detail the type of pneumonia characteristic of tularemia. It is essentially a thrombosis of small arterioles with resulting necrosis, surrounded by mononuclear cell infiltration. This same type of lesion is found at autopsy in the organs such as the spleen, liver, kidneys, etc. Several other authors have called attention to the serious pulmonary manifestations of this disease. The exact mortality rate of tularemic pneumonia is difficult to determine at present. One of the difficulties lies in accurate diagnosis; another indecision

as to whether the pneumonia is the major manifestation in the individual case. For instance, Blackford<sup>5</sup> and his associates<sup>6</sup> have recently emphasized the frequency of lung involvement even in the ulcero-glandular form and suggest chest films in the acute stage of all cases. In an unselected series of 35 cases, chest manifestations were diagnosed clinically in only half; roentgenologically in 90%. Seven of the 35 had pneumonia, and 3 of the 7 died.

Gundry and Warner<sup>7</sup> reviewed 15 autopsied cases, all of which showed sepsis in the sense that the spleen, liver, lung, kidneys or central nervous system were involved. In five pneumonia was not diagnosed clinically yet at autopsy it was found in all except two, in one of which the autopsy was incomplete and definite signs of pneumonia had been found clinically. Parmer and MacLachlan<sup>4</sup> found that 36% of all cases showed evidence of pneumonia clinically or at autopsy and that pneumonia is found in 62.5% of autopsied cases. Francis<sup>8</sup>, on the other hand, from cases reported in the literature and from questionnaires on individual cases sent out by him through the U. S. Public Health Service, estimates pulmonary involvement in only 13% of all deaths. Foshay<sup>9</sup> has found clinical pneumonia in 17% of all cases. In Kavanaugh's<sup>10</sup> carefully analyzed 123 cases, 16 had definite pulmonic tularemia, with a mortality rate of 25% without serum treatment. Certainly, then, many, if not the majority of patients with this type of pneumonia, recover without serum. Certainly, too, in those cases, particularly elderly individuals with pneumonia as the predominating manifestation of the disease, the prognosis is more grave than in any other manifestation except tularemic sepsis. Bowman and Bianco<sup>11</sup> reported a case of severe pneumonia which recovered without specific treatment after a long illness of six months. In Foshay's<sup>9</sup> latest report out of 32 patients with clinical tularemia, all receiving anti-serum, none died.

Case 2 was a severe tularemic pneumonia, the local lesion occurring under the tongue. The clinical improvement in this patient of 58, 6 days after receiving serum (on the 14th day) was marked. Fever continued thereafter, but the patient's general condition improved



very rapidly. He was able to return to work three months after the onset of illness. After remaining well for two months, following excessive physical activity he developed tularemic pleurisy with effusion, which promptly subsided following anti-tularemic goat serum (the latter was available through the kindness of Dr. Foshay to avoid the possibility of sensitization to horse serum) and has remained perfectly well.

#### SUMMARY

1. The two cases of tularemia here reported, infected from the same rabbit, make a total of three cases reported in Delaware.

2. Both cases were treated with the first specific anti-serum commercially available.

3. Case 1, an ulcero-glandular type, age 21, was treated with 30 cc. of commercial anti-serum (horse), beginning on the 18th day of disease, and the patient was well six weeks after the onset.

4. Case 2, a severe tularemic pneumonia, age 58, treated with 90 cc. of commercial anti-serum (horse), beginning on the 14th day of illness, returned to work within three months; had a relapse two months later, which subsided immediately following 30 cc. of goat serum.

5. The prognosis of tularemic pneumonia in the light of present knowledge has been briefly discussed.

#### REFERENCES

1. Wherry, W. B. and Lamb, B. H.: Infection of Man with *Bacterium Tularensis*, *J. Infect. Dis.* 15:331, 1914.
2. Foshay, Lee: An Antiserum for the Treatment of Tularemia, *J. A. M. A.* 101:1447-1449, 1934.
3. Foshay, Lee: Tularemia Treated by a New Specific Antiserum, *Amer. J. Med. Soc.*, 187:235, 1934.
4. Farmer, H. H. and MacLachlan, W. W. G.: Tularemic Pneumonia, *Ann. Int. Med.* 5:687-698, 1931.
5. Blackford, S. D.: Pulmonary Manifestations in Human Tularemia: A Clinical Study, *J. A. M. A.* 104:891-895, 1935.
6. Archer, V. W.; Blackford, S. D.; Wissler, J. E.: Pulmonary Manifestations in Human Tularemia, *J. A. M. A.* 104:895-898, 1935.
7. Gundry, L. P. and Warner, C. G.: Fatal Tularemia: Review of Autopsied Cases with a Report of a Fatal Case, *Ann. Int. Med.* 7:837, 1934.
8. Francis, Edward: U. S. P. H. S.: Personal Communication.
9. Foshay, Lee: On the Treatment of Tularemia, *Ohio S. M. J.*, 31:21-24, 1935.
10. Kavanaugh, C. N.: Tularemia, a Consideration of 123 Cases with Observation at Autopsy in One, *Arch. Int. Med.* 55:61-85, 1935.
11. Bowman, P. G. and Bianco, A. J.: Tularemic Pneumonia, *Ann. Int. Med.* 7:1491-1495, 1934.

### THE RELATIONSHIP OF DENTAL FOCI OF INFECTION TO OCULAR PATHOLOGY

SAMUEL M. SOSNOV, D. D. S.

Wilmington, Del.

Ocular symptoms are often observed in the dental office which subside on the removal of infected roots or teeth and the clearing up of

any pathological manifestations affecting the mucous membranes or the soft structures of the mouth. There is no doubt therefore, at least in the minds of many of the dental profession, that infected teeth do and will cause ocular pathology.

Let us become didactic for a few minutes and review the neurologic structure of the face, jaws and eyes, and the nerves which are common to them.

The fifth cranial nerve (trigeminal) is the largest cranial nerve and is the great sensory nerve of the head and face, and the motor nerve of the muscles of mastication. The semilunar (Gasserian) ganglion occupies a cavity (Meckel's) in the dura mater covering the trigeminal impression near the apex of the petrous portion of the temporal bone. From its convex border three large nerves proceed: ophthalmic, maxillary, and mandibular.

The ophthalmic and the maxillary consist exclusively of sensory fibres; the mandibular is joined outside the cranium by the motor root.

Associated with the three divisions of the trigeminal are four small ganglia. The ciliary ganglion is connected with the ophthalmic nerve; the sphenopalatine ganglion with the maxillary nerve; and the otic and submaxillary ganglia with the mandibular nerve. All four receive sensory filaments from the trigeminal.

The ophthalmic nerve, or the first division of the trigeminal, is a sensory nerve. It supplies branches to the cornea, ciliary body and iris, to the lacrimal gland and conjunctiva, to a part of the mucous membrane of the nasal cavity, and to the skin of the eyelids, eyebrow, forehead and nose.

The maxillary is the second branch of the trigeminal. It divides into the following branches, of which I will give only the ones that will interest us directly.

(a) The zygomatic enters the orbit by the inferior orbital fissure and has two branches: the zygomaticofacial, which perforates the orbicularis oculi and joins the facial nerve and with the inferior palpebral branches of the maxillary; and the zygomaticotemporal which joins with the lacrimal, and in turn gives off a slender twig which runs to the lateral angle of the orbit.



(b) The posterior superior alveolar, to the teeth.

(c) The middle superior alveolar, to the teeth.

(d) The anterior superior alveolar, to the teeth.

(e) The inferior palpebral supplies the skin and the conjunctiva of the lower eyelid, joining at the lateral angle of the orbit with the facial and the zygomaticofacial nerves.

The mandibular is the third branch of the trigeminal. It supplies the teeth and gums of the mandible.

One can readily see then, that the nerves supplying the face, jaws, teeth and eyes are intimately connected and inosculate freely.

It is quite plain from a brief perusal of the above, that pains referred to various branches of the trigeminal nerve are of very frequent occurrence and should always lead to a careful examination in order to discover a local cause. As a general rule the diffusion of pain over the various branches of the nerve is at first confined to one only of the main divisions, and the search for the causative lesion should always commence with a thorough examination of all those parts which are supplied by that division; although in severe cases pain may radiate over the branches of the other main divisions. The commonest example of this condition is the neuralgia which is so often associated with dental caries; here, although the tooth itself may not appear to be painful, the most distressing referred pains may be experienced, and these are at once relieved by treatment directed to the affected tooth.

Many other examples of trigeminal reflexes could be quoted, but it will be sufficient to mention the more common ones. Dealing with the ophthalmic nerve, severe supra-orbital pain is commonly associated with acute glaucoma or with disease of the frontal or ethmoidal air cells. Malignant growths or empyema of the maxillary sinus, or unhealthy conditions about the inferior conchae or the septum of the nose are often found giving rise to "second division" (maxillary) neuralgia and should always be looked for in the absence of dental disease in the maxilla.

It is in the mandibular nerve, however, that some of the most striking reflexes are seen.

It is quite common to meet with patients who complain of pain in the ear in whom there is no sign of aural disease, and the cause is usually found in a carious tooth in the mandible.

It may be easily seen, therefore, that infective processes arising in the teeth may manifest themselves in diseases of the eye, ear, or any part of the skull supplied by the fifth nerve, or cause reflex symptoms which may lead to eventual disease of a part.

During the period of eruption of the deciduous, and less frequently the permanent teeth, and later as a result of the various forms of caries and other diseases producing irritation of the terminal filaments of the fifth nerve, we may have most marked reflex symptoms of the eyes. Neurotic manifestations, such as nictitation, mydriasis, myosis, relaxation, and more frequently spasm of accommodation, and even disturbances of the external ocular muscles such as insufficiency, leading in some cases to diplopia, are undoubtedly relieved at times by the removal or treatment of a carious tooth.

I was strongly impressed at one time by a patient who told me that he had been relieved of chronic dyspepsia for which he had been treated during a course of two years by the correct fitting of glasses. The relief continued for a year when, without warning or apparent cause, the symptoms returned. The most critical examination by oculists failed to reveal a change in the refraction, presbyopia, or muscular balance. He was finally referred to me for x-ray examination of his teeth. Five infected teeth were found which, while not giving local symptoms, were definitely devitalized. On the removal of these teeth his gastric symptoms disappeared. This case illustrates most completely the general principle that dental disease and asthenopia resulting from muscular imbalance, two absolutely different conditions, but in both of which the terminal filaments of the fifth nerve are involved, may produce the same group of reflex nervous symptoms in a remote organ.

Iritis, keratitis, phlyctenula, and even glaucoma have been attributed to disease of the teeth; and it is undoubtedly the case that an alveolar abscess, with or without involvement of the maxillary sinus, may give rise to in-

fectious processes in the orbit, lids and eyeball, although such a relation is of rare occurrence.

Let it not be supposed, however, that carious and infected teeth are the sole cause of eye trouble of dental origin. Other dental sources may be impacted or imbedded teeth. These teeth are often regarded as harmless. Clinical experience, however, shows that they are not uncommonly the sources of serious and varied complications. It is my opinion that impacted teeth must be looked upon as misplaced bodies, and as such they are potential sources of trouble. Experience and many reports derived from different observers confirm the conclusion that they are best removed upon the slightest provocation and often even in the absence of disturbing symptoms. Cases of insanity, blindness, tinnitus aurium, trifacial neuralgia, otitis and affections of the eyes have been traced to impacted teeth.

The mechanism of these neuralgic phenomena is obscure. It is probable that, owing to its incorrect position, the nerve supply of the tooth proper is irritated; there may be pressure upon a nerve trunk in the area near the tooth; or the circumferential pressure in the bone surrounding the impacted tooth may cause the pain.

The following cases in point will illustrate the complex neuralgic conditions which may arise as a result of impacted teeth.

Female; 22 years of age; American; no occupation. Family history negative. When I first saw the patient she was suffering with intense pain on both sides of the head. The pain was reflected to the ears, and to the temporal, the parietal, the occipital and the cervical regions. She was also suffering with uncontrollable headaches, spells of vertigo, and blurred vision. She could not concentrate on anything, and was unable to turn her head, very much like one suffering from wry neck. Upon radiographic examination three impacted third molars were found, together with two supernumerary teeth completely buried in the bone. The almost immediate relief following the operation for their removal was truly remarkable. The pain seemed to have entirely abated within forty-eight hours, and the patient could turn her head with freedom and the vertigo and blurred vision had disappeared.

Female. Age 50. Housewife. This patient complained that at certain times during the day the eye muscles became paralyzed. The patient could see but the eyeball refused to move. After treatment by several oculists she was referred to me for x-ray examination of the teeth. The examination disclosed that while there was no infection, yet, imbedded in the palatine bone and lying horizontally was a cuspid tooth. After the tooth was removed the relief was gradual. It is now six months after the operation and the condition has not recurred. Relief is not always gradual but may come at once, depending on the condition.

Let us now refer again to the carious tooth and observe the mechanism by which the tooth can cause reflex symptoms in the eye. The tooth proper consists of three parts; the enamel or the outer covering of the tooth; the dentin or the body of the tooth; and a small cavity inside the dentin which contains arteries, veins, and nerves known as the pulp, or more commonly as the nerve.

Decay or caries of a tooth usually starts burrowing into the enamel, which is a completely dead substance, and therefore no pain is felt. Enamel is the end product of ameloblastic activity. Immediately beneath the enamel, however, there is a conglomeration of nerve endings which form what is known as the dento-enamel junction, these nerve endings being extensions from the pulp and passing through the dentin by means of microscopic tubules known as the dentinal tubules.

After caries has burrowed through the enamel and touches the dento-enamel junction of nerves there is an acute onset of pain. Sometimes this pain is so severe that the whole head is affected. I have had women tell me that they would rather go through the pain of childbirth than have a toothache, although this may be an exaggeration.

After the caries goes through the dento-enamel junction there is a gradual lessening of the pain until it is gone; the degeneration of the nerve has begun and the nerve is no longer irritated. Then for a period its course through the dentin is practically painless. We then have a third and last stage of caries, the stage of pulpal involvement. The nerve is exposed, and we have an acute exacerbation of pain. It is at this time too late to use

any palliative measures and the only thing to do is to extract the tooth or remove the nerve.

We now come to the ingress of bacteria and the consequent sepsis of the tooth, and the formation of an abscess. This is a condition of bacterial involvement, with a gradual spread into other areas and other organs. We now have a focus of infection, and from this focus the eye is a close and frequent victim. At first the eye becomes bloodshot, vessels enlarge, and vision becomes blurred. Toxic products are absorbed by the blood stream and may cause a toxic amblyopia. In the early stages these poisons merely produce aberration of function, and can be cleared up if the focus is removed. Another form of toxic amblyopia may be caused by the use of arsenic in the devitalization of teeth, and also in the treatment of trench mouth. Infection and abscess of the teeth, then, quite frequently cause dysfunction of the eye. Sometimes the tissues swelling around an abscessed tooth in the vicinity of the eye will cause the eye to close. This may also happen after a tooth is removed, but is only of short duration.

Occasionally a temporary paralysis of the eye is caused by the blocking of the infra-orbital nerve with novocain for the extraction of the anterior teeth. Some of the novocain enters the floor of the orbit and causes this temporary paralysis.

In the extraction of upper molar teeth a root will sometimes be forced into the maxillary sinus, and if not immediately removed infection will set in and the floor of the orbit will be eaten away.

The various dental diseases such as Vincent's angina and periodontoclasia, or any suppurative condition of the teeth or oral cavity may cause infection of the eye by continuous or contiguous means.

There are cases in which trigeminal symptoms are present in which the patient is wearing artificial dentures. This may be explained as due to a hidden root or tooth, or on a basis of pressure. The mucous membrane of the palate is very thin. The bony portion of the palate is immediately beneath, and any pressure caused by a plate will cause pressure on either the posterior palatine or anterior palatine nerves, which are branches of the maxillary nerve. Ulceration by a plate that is too

loose or too tight may cause an infection of the gum and continuously to the eye.

Dental tumors may cause disease of the eye through infiltration or metastasis.

In summation, many inflammatory diseases of the eye are due to reflex causes, not the least of which are affections of the teeth. This is due to the intimate relationship between the distribution of the fifth nerve and the nerves of the eye. Affections of the eye attributable to diseased teeth occur frequently and quite often the oculist is ignorant of the cause and the disturbing member is allowed to remain.

Dental affections provoke ocular trouble in two ways: by inflammation or irritation of the trigeminal nerve due to dental affection, causing reflex troubles in a manner similar to that in which neuralgia of the fifth nerve or tic-doloreux is produced; and by the extension of an inflammatory process of the dental root toward the maxillary sinus, thence towards the orbit by continuity and contiguity of structure.

The most frequent reflex ocular troubles are pronounced injection of the conjunctiva with epiphora. In children the relation between dental affection and keratitis and phlyctenular conjunctivitis is more noticeable, this being partly explained by irritation of the trigeminal nerve.

Pain in the dental nerves is frequently seen in keratitis and cyclitis, and conversely in dental neuralgia there is found some hyperaesthesia of the nerves of the eye, which makes the contraction of the muscles of accommodation very painful. We know that dental pains and irritation of the trigeminal nerves cause an increase of intra-ocular tension and often produce attacks of acute glaucoma where there is a predisposition to neuralgia.

Children predisposed to toothache quite frequently develop chorea, limited particularly to the orbicularis muscles.

Dental affections produce reflex symptoms on the side of the facial nerve, for example, blepharospasm and chronic contraction of the orbicularis muscles of the eyelids.

It is important when the symptoms seem vague that inquiry be made as to the condition of the teeth in order that all obstacles to a correct diagnosis and treatment may be removed. There are many instances on rec-



ord where the removal of a carious tooth was the means of restoring sight. Not infrequently abscesses develop in the lid as the result of abscesses around the teeth.

Other complications of dental pains are amblyopia and amaurosis. These symptoms disappear after the extraction of the offending teeth. In such cases it is not uncommon to find peripheral contraction of the field of vision, pain in the eyes upon reading, dazzling by intense light, and the appearance of the complementary colors (green, purple, orange) especially when the sight is concentrated.

The contracted field of vision, amblyopia, and amaurosis are explained by the reflex constrictions of the vessels of the retina, these symptoms being analogous to those observed in the affections of the nose.

Wiecherkiewicz reports the following observations: Sometimes after the extraction of a diseased tooth, gangrene of the eyelids and orbital abscesses appear; the inflammation attacking the meninges, the patient dies from meningitis in some cases, proving that thorough asepsis should be observed especially in the extraction of teeth.

Parinaud has demonstrated that in children of five or six years when they are beginning to lose their deciduous teeth, and also in adults, dental lesions not always apparent may be the starting point of osseous or periosteal changes of the inferior orbital border; of fistulae in the lacrymal sac or lower lid, and also periostitis of the nasal canal.

In conclusion may I suggest to the oculist and the physician not to belittle the lowly tooth as a primary cause of ocular lesions. When all other treatments fail, x-ray examination of the teeth is a necessity and not to be dismissed with a shrug as not pertinent. Closer co-operation between physician and dentist will do much to lessen the frequency of ocular pathology.

### REPAIRERS OF THE LIVING BELLOWS

EDWARD PODOLSKY, M. D.

Brooklyn, N. Y.

The road to the lungs has taken a long time to travel. It began even before the journey to the center of the heart was undertaken, and it has been only within recent times that any material progress has been made. Surgery on

living, moving organs, especially when the movements of these organs are so vitally concerned with maintaining life, is hazardous and difficult. But disease is no respecter of organs. It penetrates into the most dangerous regions of the body, and where it leads the healing steel must follow.

Hippocrates was the pioneer in this field of surgery, as he was in so many others. In his treatise on "affections" he described for the first time a method of injecting air into the lungs to overcome certain diseases of the lungs. This was two thousand years ago, but little progress was made for a long time until Dr. James Carson, a Scotch physician, in the eighteenth century, made the suggestion that air might be let into the lung cavity to collapse a tuberculous lung. Dr. Carson carried on many experiments on cats, dogs, rabbits, sheeps, calves and even bullocks. He was able to collapse lungs with air with no ill results.

Unfortunately the pioneer experiments of Dr. Carson were lost sight of. Later, in 1892, Dr. Carlo Forlianini, a famous Italian surgeon, attempted to collapse a tuberculous lung by letting air into the pleural cavity. His work received but scant attention. It remained for Dr. John B. Murphy, one of America's surgical geniuses, to make this method known. In June, 1898, in the city of Denver (always a haven for the victims of the white plague) Dr. Murphy made an address before the members of the American Medical Association in which he described his remarkable work in using air to collapse tuberculous lungs. At this time the newspapers were full of the Spanish-American War, but Dr. Murphy's address was of such importance that it received widespread publicity in the newspapers, and for the first time the world became aware of the fact that surgery had penetrated into new fields.

The work of Dr. Murphy in this new field had been productive of most gratifying results. By letting air into the lung cavity the ailing lung had been squeezed tight and further progress of the disease had been arrested. And yet the first operation on the lungs was a very simple one. It is surprising that so many years had to pass before it was adopted, and it is tragic that so many victims of tu-

berculosis had to die before it became widely popular. Dr. Murphy made no mystery of his new triumph. It was a very simple operation and he described it thus. To the breathless audience at Denver city he described his operation in the following words, now historic in the field of lung surgery:

"It is exceedingly simple. Take an ordinary hypodermic needle, rub the sharp point dull on a brick, cover the butt end of the needle with cotton which serves as a filter of the air that is to enter, then insert the needle into the pleura at the site of election for the production of the pneumothorax. The skin should have been prepared previously by painting it with iodine and puncturing it with a tenotome, as is our custom. The idea now is to let the air enter the pleural cavity through the needle, the cotton filtering it as it enters, thus producing pneumothorax (collapsing the lung). The finger placed over the butt end of the needle serves as a valve. As the patient inspires the finger is lifted off the needle to allow the air to enter, and on expiration the opening is closed with the finger. In that manner you can pump the pleural cavity full of air or to any desired degree of compression. If the patient becomes too cyanotic, or if the breathing is embarrassed, lift the finger from the needle and allow a little air to escape. The procedure is now reversed. Close the end of the needle with the finger on inspiration, and remove the finger on expiration, so that the air will be pumped out instead of in. It is a very simple but an exceptionally valuable procedure for the treatment of pulmonary hemorrhage. The instruments are always at hand. The method can be instituted quickly, so that there will be no time lost. All you need is a blunt needle, a little cotton, and at the most some ice to freeze the skin, but even this is unnecessary, because when speed of operation is necessary, local anesthesia need not be resorted in any of these cases."

In later years complicated machines were invented to pump air into the lung cavity, but the pioneer work of Dr. Murphy and his method of collapsing diseased lungs remains essentially unchanged.

Surgeons were still timid. They still feared to meddle with the lungs. Dr. Murphy's en-

thusiastic address seemed to have been forgotten. From 1902 to 1912 not many operations to collapse the diseased lung were performed. And yet artificial pneumothorax had been found so useful in stopping bleeding from the lungs. "It strikes terror," said Aretaeus, ancient medical wizard, "to perceive, flowing by the mouth, that blood, whence all of mortal race derive their color, their heat, their nourishment."

In time, interest in lung collapsing by surgical means again began to spread, not only in America but throughout the world. Dr. Lillingston, an English physician, was in a rather advanced stage of tuberculosis. He could find no one in England who would undertake to collapse his diseased lung. It was necessary for him to go to Dr. Holmboe, of the Mesnallian Sanatorium in Norway, where the operation was performed and Dr. Lillingston's life saved. After his recovery he returned to his practice in London and in August 1910, at the Mundeslet Sanatorium, with the assistance of Dr. S. Vere Pearson and Dr. A. Snowden, gave the first treatment to be given in England. Dr. Lillingston preached the gospel of lung collapse in his native country and forever won the gratitude of those whose lungs needed this new treatment.

It required a bout with tuberculosis to set the mind of doctors thinking in this direction. This was the case also with Christian Saugman, a native of Denmark, who had tuberculosis of the lungs and larynx and was temporarily compelled to give up his plans to become a surgeon. He went as a patient to the sanatorium of Herman Brehmer at Goerbersdorf. After his treatment he returned to Denmark and established a sanitarium at Vejlefjord. He brought the life-saving operation of lung collapse to the attention of the surgeons of his native land with happy results.

After the year 1912 the work of Murphy became known to practically every surgeon in the world. Artificial pneumothorax is now one of the major weapons in the surgical treatment of consumption.

There is no doubt that Dr. Carson, the Scotchman, who was the first of the great lung surgeons, was right when he said: "It has long been my opinion that if ever this dis-



case is to be cured, and it is an event of which I am by no means disposed to despair, it must be accomplished by mechanical means, or in other words by surgical operation."

Merely collapsing the diseased lung is not sufficient in more advanced cases; sometimes more radical means are required. At times it is necessary to remove the phrenic nerve in order to put the lung to rest. At other times the chest wall has to be opened up and the strong bands of adhesive tissue cut with the scalpel to allow the lung to collapse.

In 1913 Dr. C. F. Hoover called attention to the fact that the upper parts of the diseased lung could be put to rest more satisfactorily if the small muscle at the upper part of the chest, the scaleni, were operated upon. This new operation, which has been perfected by Dr. Evarts A. Graham, is the latest advance in the surgical treatment of the consumptive lung.

Actual operation upon the lung itself is a modern innovation. Dr. E. Drennen was among the first to report a case in which he used the cautery to destroy diseased portions of the lungs. This work has been carried forward largely by Dr. Graham, who has reported a series of cases in which the cautery was used to char away diseased lung tissue, and his clinic at the Barnes Hospital, St. Louis, has been the scene of some of the most remarkable lung operations in America. There is the case of a girl of seventeen who one month after her tonsils had been removed began to have pain in the left shoulder. She began to cough and raise up a yellow sputum.

Careful examination revealed the presence of an abscess of the upper portion of the left lung. This clearly called for an operation. Dr. Graham removed about two inches of the fourth and fifth ribs and exposed the upper portion of the left lung. The abscess was then evacuated and the cavity was treated with the cautery. There were no bleeding. The wound was packed, the ends of the ribs were plugged with bone wax. The cough disappeared, and there was a rapid gain in weight. The patient was discharged as completely cured.

A little later a woman of 27 was sent to the Barnes Hospital suffering from headache,

chills and fever. She complained of a sharp pain in the right lower portion of the chest. She had lost 55 pounds in the past year and was constantly coughing up foul sputum, often spotted with blood. Dr. Graham diagnosed an abscess of the right lower lobe of the lung. Artificial pneumothorax proved of no value. More radical intervention was called for.

The seventh, eighth and ninth ribs were cut away for a distance of three inches. The abscess was opened and the pus allowed to flow out. The cautery was then applied and a large cavity in the lung was burned out. Following this operation there was a remarkable improvement and a gain in weight following this lung operation.

Another case was that of a man of 40 who had come to the hospital complaining of a cough which had been lasting more than a year. He was in poor health, having lost much weight, and the most annoying symptom was a pain in the chest. Careful examination showed a lung abscess. The seventh and eighth ribs were cut away for a distance of about 4 inches. When a needle was plunged into the diseased area no pus was found. The cautery was then plunged into the diseased lung tissue and a cavity containing very thick pus was found. The roof of the abscess was burned away, the pus evacuated and the cavity cauterized.

Following the operation the man improved rapidly. The cough became less and he began to put on weight. In a short time he was so much improved that he was able to return to his work as an engineer.

These are but a few of the many cases which Dr. Graham has treated for lung abscess with the cautery. It has been his experience as well as that of other lung surgeons that the best treatment for chronic lung suppuration is the complete destruction of the diseased tissue. The cautery seems to be the ideal means of doing this. The operation is not a difficult nor a dangerous one.

Until three years ago no patient had ever recovered after the complete removal of one lung. As a result, cancer of the lung, as well as other serious ailments involving a whole lung, were considered helpless. In the year



1931 Dr. Nissen made the first bold step forward when he removed the entire left lung for bronchiectasis. Since then other lung surgeons have grown bolder and the names of Drs. Windsberg, Haight, Alexander, Mason, Van Allen and Overholt are now famous in surgical history.

Until these pioneers showed the way, cancer of the lungs was considered hopeless. When the x-ray revealed that a cancer was gnawing in some parts of the lung doctors shook their heads sadly, for they realized they could do nothing, and that the patient would be dead in a few weeks or months. But Dr. Graham refused to accept this verdict.

Into his clinic came a physician, forty-eight years of age, who for a period of seven months had had repeated attacks of cough and fever with pain in the left side of the chest. During this time he had lost considerable weight.

Careful examination revealed the fact that he was suffering from cancer of the left lung. The cancer was so situated and in such a state that the only hope for relief was in removing the entire left lung. The patient was a physician and fully realized the seriousness of his ailment. He consented to an operation.

The lung was cut off with an electric cautery knife. All blood vessels were carefully tied off. Radium was implanted into the various parts of the stump of the lung to be sure to destroy any remaining seeds of the cancer. The patient left the operating room in excellent condition, but as an added precaution he was given a transfusion of blood.

The pain in the back began to subside and within three weeks the wounds were solidly healed. The patient's strength gradually increased, his appetite was excellent and he was discharged from the hospital two months after the operation feeling better than he had for many months. In time he regained his former status in health and he is still alive, living with one lung, but now free from the ever-menacing presence of cancer.

This operation was performed in 1933 and the results were so encouraging that surgeons had the courage to regard cancer of the lung as not entirely hopeless. Surgeons in other parts of the country began to feel that removing an entire lung for cancer was justi-

fied. Not long after Dr. Graham reported his operation a girl of three was admitted to the Johns Hopkins Hospital complaining of pain in the chest. After much study it was decided that the child had a cancer of the left lung. This was confirmed when a piece of lung tissue was removed and carefully examined under the microscope. An operation was performed in which the entire left lung was removed. The child stood the operation well. In fact, she was up on the fourth day and about the ward as if nothing had happened. She continued to improve and when last seen, one year after the operation, she was entirely well and evidently entirely free from any threat of cancer. This operation was performed by Dr. William Rienhoff, Jr.

This was not the only operation performed by Dr. Reinhoff to remove a cancerous lung. There was also the case of a young woman of 24. She had been complaining of a constantly increasing sensation of pain in the left lower part of the chest at about the level of the fourth rib. She had also coughed up blood at increasing intervals.

Examination via the bronchoscope showed a tumor at the root of the lung. A small portion of the tumor was removed and when examined under the microscope proved to be a cancer. At operation the entire left lung was removed, without any untoward reactions. She began to improve steadily, and at the present time she is the picture of a very active young married woman in excellent health, a condition which would have been impossible before the lung surgeons acquired enough courage to remove an entire lung when involved in serious disease.

The present-day developments in technique in removing entire lungs is one of the greatest accomplishments, perhaps the greatest accomplishment, of the lung surgeon. It removes another formerly hopeless condition from the dwindling list of entirely hopeless diseases.

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## DELAWARE ACADEMY OF MEDICINE

The library collection now consists of approximately 2,500 volumes and 115 current American and foreign periodicals devoted to medicine, surgery, dentistry and allied subjects. That this material is in steady use is

indicated by the variety of recent requests as mentioned below:

Recurrent phlebitis, pernicious anemia, cancer of the lip, ketogenic diet, induction of labor, cleft palate, chronic ulcerative colitis, appendicitis following tonsilectomy, Parker-Kerr technic in gastro-enterostomy, anatomy of the jaws, tularemia, hydatidiform mole, carbon monoxide poisoning, medical ethics, meningococcus meningitis, cancer of the prostate, ventriculin, life of Sir William Osler, intestinal fistula, carcinoma of the orbit.

The library serves the medical and dental professions in the following ways:

**REFERENCE SERVICE:** Besides telephone requests which can usually be answered immediately, such as an address in the A. M. A. Directory, or checking a reference in an index, etc., this service includes selecting from the library collection the material needed for information on some subject, or for the preparation of a paper, or for the reporting of an interesting case.

Books are loaned for two weeks, and periodicals for one week. Each can be renewed if needed for a longer time. Any material needed for reference and not in the library may be borrowed, within a few days, from local libraries or from medical libraries in other cities through the inter-library loan plan.

**BIBLIOGRAPHIC SERVICE:** This service includes the compilation of bibliographies for any phase of a subject or for any period of years. These are kept on file and are brought up to date from time to time as the need arises.

**SPECIAL INTERESTS SERVICE:** Upon request of a member all current periodicals as they are received are checked for articles in whatever field he may be interested, and then a memorandum is sent that such articles have been received and are being held until he has time to look over them.

Some statistics showing the use that has been made of the library during 1935 will be of interest:

Circulation: Books, 61; periodicals, 313.

These figures are exclusive of the use made of material in the Library Reading Rooms.

Persons consulting the library: Members:

physicians, 45; dentists, 5; non-members, physicians, 5; dentists, 1; scientific workers, laboratory technicians and others, 16.

Library hours: Daily, 10 a. m. to 5 p. m.; Saturdays, 10 a. m. to 12 noon. Open on evenings of meetings.

### New Policy of American Medical Ass'n

A business meeting of the Council on Medical Education and Hospitals was held at the Brown Palace Hotel, Denver, September 15, 1935.

According to the minutes the survey of American medical schools so far completed has revealed certain significant weaknesses; namely,

There is a tendency for medical schools to enlarge their enrollment without a corresponding increase in personnel or instructional facilities.

With a growing appreciation of the necessity for an intimate correlation between clinical and laboratory knowledge, it is evident that this can be obtained only by increasingly close contact between preclinical and clinical departments continuously maintained from the time the student first enters the medical school until he graduates.

The advances of the medical sciences have been and should be independent of any sectarian point of view, and medical education should not be handicapped or directed by a dogmatic attitude toward disease.

For these reasons the Council took the following action:

(a) *Resolved*, That in each medical school the number of students should not exceed the number that can be adequately taught with the laboratory, library and clinical facilities available and for whom a sufficiently large and competent teaching staff is provided.

(b) *Resolved*, That after July 1, 1938, the Council on Medical Education and Hospitals will no longer publish a list of approved two-year medical schools.

(c) *Resolved*, That after July 1, 1938, the Council on Medical Education and Hospitals will no longer carry on its approved list schools of sectarian medicine.—*J. A. M. A.*, Oct. 5, 1935.

# EDITORIAL

## DELAWARE STATE MEDICAL JOURNAL

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W. EDWIN BIRD, M. D. .... EDITOR  
Du Pont Building, Wilmington, Del.

WILLIAM H. SPEER, M. D. .... Associate Editor  
917 Washington St., Wilmington, Del.

M. A. TARUMIANZ, M. D. .... Associate Editor & Bus. Mgr.  
Du Pont Building, Wilmington, Del.  
Telephone, Wilmington, 4368

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Manuscript should be sent in typewritten, double spaced, wide margin, one side only. Manuscript will not be returned unless return postage is forwarded.

The right is reserved to reject material submitted for either editorial or advertising columns. The Publication Committee does not hold itself responsible for views expressed either in editorials or other articles when signed by the author.

Reprints of original articles will be supplied at actual cost, provided request for them is attached to manuscripts or made in sufficient time before publication.

All correspondence regarding editorial matters, articles, book reviews, etc., should be addressed to the Editor. All correspondence regarding advertisements, rates, etc., should be addressed to the Business Manager.

Local news of possible interest to the medical profession, notes on removals, changes in address, births, deaths and weddings will be gratefully received.

All advertisements are received subject to the approval of the Council on Pharmacy and Chemistry of the American Medical Association.

It is suggested that wherever possible members of the State Society should patronize our advertisers in preference to others as a matter of fair reciprocity.

Subscription price: \$2.00 per annum in advance. Single copies, 20 cents. Foreign countries: \$2.50 per annum.

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### THE HOME OFFICE

An abstract of the minutes of the September meeting of the Board of Trustees of the American Medical Association contains (J. A. M. A., October 12, 1935) this item:

#### ENLARGING AND REMODELING OF HEADQUARTERS BUILDING

Consideration was given to the following proposals for relieving the crowded and congested condition in the headquarters office: (1) adding two stories on the present building and building an assembly room and a small meeting room on the roof, resurfacing the building with limestone and doing such repairing and remodeling as would seem to be indicated to put the present building in first-class condition; (2) selecting a new site and erecting thereon a new building which will provide for future growth. Bids and offers on these two proposals were received, and the Board approved the first proposal and authorized the closing of contracts.

So the old lady is to have a lengthening operation, a new dress, and some flowers on her bonnet! Good, very good; but not quite good enough to suit the rank and file of the fellows and members of the A. M. A. We have no doubt that the Board, after comparing the bids on the two proposals, felt obliged to do the temporary thing; they certainly weighed the Association's financial position, both present and prospective; and they have demonstrated in the past their sagacity and business acumen. Hence, the rank and file, willy nilly, must accept the present decision as the best that can be made at the moment.

Even so, certain considerations must be kept in mind. For years widespread criticisms have been heard of the location, setting and style of the headquarters building. When one considers that the American Medical Association is a national institution—the largest scientific body in the world—it is most regrettable that it happens to be in a structure that looks more like a factory than the home of science. True, it is a factory, when one considers that one of America's greatest printing operations takes place therein, and a wonderfully efficient factory at that; and true it is also that the main thing after all is neither brick nor brass but brains, and this old building has had its share of that too; yet the fact remains that visitors to headquarters are quite uniformly disappointed when they do not behold a structure that really signifies the prestige and the dignity of the medical profession.

We are passing through a period of storm and stress, and the end is not yet, nevertheless some plans more permanent than the mere expedient just adopted should be laid. Right now, while realty values are still well below anticipated quotations, is the time to select and acquire a new site. The very least that should be done is to get a long term option on the proper site, so that when "the day" comes we shall be all set to go. Even this may cost a lot of money, but it can be done. Of all organizations, the A. M. A. is the one that should ever bear in mind the dictum of science—the impossible of today is the commonplace of tomorrow.



## WOMAN'S AUXILIARY: A. M. A.

President, Mrs. Rogers N. Herbert, Nashville, Tennessee.

President-elect, Mrs. Robert E. Fitzgerald, Wauwatosa, Wisconsin.

### *Radio Programs*

Dramatized for Medicine and Health

"Your Health—Ladies and Gentlemen..."

This toast—through the music—each Tuesday at 5 p. m., Eastern Standard Time (4 p. m., Central Standard Time, 3 p. m., Mountain Time), will introduce the new radio program of the American Medical Association. It will be offered over the blue network of the National Broadcasting Company, beginning October 1, 1935. With the co-operation of the National Broadcasting Company, a new type of program, in vivid dramatic form with incidental music, is being developed, showing:

Medical emergencies and how they are met!

The hero of the medical emergency, the doctor, who is available day and night for the protection and promotion of your health, is the real sponsor of this series of practical and entertaining broadcasts.

Each Tuesday—Blue network, NBC-WJZ.

Program—Nov. 19, Common Household Emergencies, Dr. W. W. Bauer; Nov. 26, Automobile Accidents, Dr. Morris Fishbein; Dec. 3, Tuberculosis, Dr. Morris Fishbein; Dec. 10, Hunting Accidents, Dr. Morris Fishbein; Dec. 17, Animal Diseases in Man, Dr. W. W. Bauer; Dec. 24, Eat, Drink and Be Merry, Dr. W. W. Bauer; Dec. 31, Pneumonia, Dr. W. W. Bauer.

Refer to Hygeia for announcements of later programs.

What the Auxiliary can do to help the A. M. A. radio program:

1. Listen to it, so they will know what it is.
2. If the local NBC station does not take it, ask them to do so.
3. Write letters to the National Broadcasting Co., if they like the program, and to the A. M. A., if they do not, stating why.
4. Tell their friends about it.
5. Tell organizations about it, especially those to whom it may be useful—Women's Clubs, Child Study Groups, Parent-Teachers' Associations, schools.

W. W. BAUER, M. D.

## FROM THE NATIONAL PRESIDENT

It has been my privilege to attend a meeting of the Women's Auxiliary to the Kentucky State Medical Association, held in Louisville from September 30, through October 2, and it was most interesting and inspiring to meet such an alive, enthusiastic group.

The Advisory Council of the Kentucky Auxiliary made itself felt as an active institution by announcing that advisory members would outline the Auxiliary programs for the coming year in order that it might include special subjects that they considered of current importance for Auxiliary study. It is gratifying to know that the men are actively interested, not only in supporting, but in directing and assisting the work of the women.

The meeting marked the close of the successful administration of Mrs. J. I. Greenwell and many fine reports were given indicating progressive work well done throughout the past year.

The inaugural address of the new president, Mrs. Luther Bach, exhorted the members to live up to the high standards of the past. She placed emphasis upon Health, Hygeia and Public Relations.

A resolution was passed for the study of health insurance.

It was a pleasure to see Mrs. J. Bonar White, of Atlanta, Georgia, first vice-president of the National, and president of the Southern Medical Auxiliary, who attended the convention. Mrs. White and I had the pleasure of addressing the members at a luncheon meeting the closing day.

In outlining plans for the work of your Auxiliary for the coming year, remember that our program chairman, Mrs. V. E. Holcombe, stands ready to assist you in every way possible. Communications to Mrs. Holcombe should be addressed to 1106 Virginia street, Charleston, W. Va.

Pamphlets and handbooks containing scientific information on nearly every subject which your Auxiliary might care to present may be secured at a nominal cost from Dr. W. W. Bauer, director, Bureau of Public Instruction, American Medical Association, 535 North Dearborn street, Chicago, Illinois. An

especial need is felt, at this time, for pamphlets prepared by the A. M. A. on current subjects, such as "New Forms of Medical Practice," and the "Handbook of Sickness Insurance, State Medicine and the Cost of Medical Care." These pamphlets may be obtained from Dr. R. G. Leland, director, Medical Economics, 535 North Dearborn street, Chicago, Illinois.

Let me reiterate Mrs. Holcombe's message in regard to radio talks. Special radio talks have been prepared by the A. M. A. for five, ten, and fifteen-minute broadcasts, and may be obtained for local use by writing the Bureau of Public Instruction. If planning local broadcasts, bear in mind the dates of the national A. M. A. radio programs to avoid conflicts. The A. M. A. began its radio broadcasts on October 1, to continue every Tuesday thereafter over the blue network of the National Broadcasting Company at 5 p. m., eastern standard time; 4 p. m., central standard time, 3 p. m., mountain time.

Consult your Medical Journal for announcements of subjects and speakers on the A. M. A. broadcasts. They will be printed weekly in the Journal under the heading, "Association News." The general theme, "Medical Emergencies and How They Are Met," will be presented in dramatized form with incidental music. Publicize these programs as widely as possible by announcing them in your various club activities and by telling the hour of the programs to all with whom you come in contact.

As we begin the records of our new year, let us continue to emphasize the importance of accuracy. It is vital to the National Auxiliary that each state and county organization keep their records accurate and up to date, with names and addresses in alphabetical order. The national treasurer and chairman of finance are working out plans to simplify the present system, and these plans cannot succeed unless based on accurate records of each individual Auxiliary.

The National Auxiliary is dependent for its functioning power upon the co-operation of the state and county members, and their records may be compared with the wheels within a watch that, no matter how small, contribute

to a perfect recording of time if perfect themselves, but throw the whole out of balance, if imperfect.

Records for permanent filing are sent to the historian by national, state and county auxiliaries, and from the historian they pass on to the chairman of archives.

As we enter the new year, let us bear in mind the significant part that each Auxiliary member plays in forwarding our great health work, and let us remember that it is only through the closest co-operation and constancy to purpose that we can hope to achieve any measure of success.

MRS. ROGERS N. HERBERT, *President*.

## MISCELLANEOUS

### Ownership of Roentgenographic Negatives In Michigan

A roentgenographic negative made by a physician as an aid to diagnosis and treatment is, in Michigan, the property of the physician who makes it, unless he has entered into an agreement waiving ownership. The Supreme Court of Michigan rendered this decision September 9, the first rendered by a court of last resort with respect to the ownership of roentgenographic negatives. The decision is binding on all courts in Michigan and it may have persuasive influence on courts in other jurisdictions.

Dr. Burton G. McGarry, of Fenton, Mich., on whose initiative this case was brought to a successful issue, had treated an injured employe of the defendant, the J. A. Mercier Company, at its request. The company refused to pay for his services, basing its refusal in part on the ground that Dr. McGarry refused to deliver to the company, for examination by other physicians, certain roentgenographic negatives of the patient, the cost of which was included in Dr. McGarry's bill. At no time did Dr. McGarry refuse to permit other physicians to examine the negatives while they remained in his clinic. In the circuit court judgment was given in Dr. McGarry's favor, and the company appealed to the Supreme Court of Michigan.

Roentgenographic negatives, said the Supreme Court, are practically meaningless to an ordinary layman. They are as much a part

of the history of the case as any other record made by a physician. They constitute an important part of a physician's clinical record and preserve much of value in his experience. In a malpractice suit they may constitute unimpeachable evidence that fully justifies the treatment of which a patient complains. They are analogous to the microscopic slides of tissues that physicians make to aid them in diagnosis and treatment and which it would hardly be asserted belong to any one other than the physicians by whom they are prepared. Although roentgenographic negatives differ from the negatives of ordinary photographs, the fact that they are the property of the physicians who make them may possibly be inferred from court decisions that have held that, in the absence of express agreements to the contrary, the negatives of photographs belong to photographers, not to the persons for whom the photographs were made. There is every good reason, said the Supreme Court, for holding that roentgenographic negatives are the property of the physician rather than of the patient or other person who employs the physician, even though the patient or such other person is charged with the cost of making them. Dr. McGarry was fully justified in refusing to surrender possession of the negatives he had made. In the absence of an agreement to the contrary, such negatives belong to the physician who makes them incident to treating a patient.

While the phraseology of this decision, literally construed, limits its applicability to cases in which physicians make roentgenographic negatives for their own use, it may reasonably be assumed that such negatives made for a physician, to be interpreted by him, are his property quite as much as if he had made them himself. The decision leaves undetermined the questions whether a patient, personally or through physicians or others employed by him, has the right to inspect a roentgenographic negative while it remains in the possession of the physician who made it, or to require, on payment of the reasonable cost, that prints of the negative be furnished to him. It is, however, a distinct advance toward the settlement of a troublesome and important question.—*Jour. A. M. A.*, Oct. 12, 1935.

### Propaganda for Reform

**DANGERS OF SLIMMING:** Repeatedly and emphatically The Journal has published statements relative to extraordinary hazards involved in the sudden reduction of weight, occasionally described as banting, slimming, thinning, slenderization and in other ways. From the time when dinitrophenol was first proposed as a product with specific favorable attributes for this purpose, The Journal warned against its uncontrolled use, because the product itself is not standardized and because there was hardly sufficient evidence available to say what the ultimate effects of the drug might be. Now it appears that one of the ultimate and disastrous effects is in some persons rapidly developing cataracts. Dinitrophenol now forms the basis of a half dozen or more "patent medicines," including one called "Slim," which has been confiscated under the Food and Drugs Act, as well as others called Nitromet, Dinitrolac, Nitraphen, Dinitriso, Formula 281, Dinitrose, Nox-Ben-Ol, Re-Du, Aldinol, Dinitronal, Prescription No. 17, Dinitrole, Tabolin and Redusols. In calling attention to these products Mr. W. G. Campbell, chief of the Federal Food and Drug Administration, says: "It is interesting to note that all the so-called reducing preparations on the market fall into three categories: First, laxatives that deny the body the benefit of its food intake, as the salts, crystals and herb teas; second, obvious frauds that depend for effect upon the stringent diets prescribed as part of the 'treatment,' as 'Syl-Vette' and 'Stardom's Hollywood Diet'; and third, the unquestionably effective but dangerous articles containing thyroid or dinitrophenol, both of which act by speeding up the utilization of food. All of them are unwarranted impositions upon the public, which cannot evaluate claims for the preparations and cannot readily appreciate the harm that may result from careless use of the products." His pronouncement is well warranted by the evidence available. (*J. A. M. A.*, Sept. 7, 1935, p. 804).

**CONNELL CANCER CURE**—In Kingston, Ont., Dr. Hendry C. Connell, an assistant professor at Queen's University Faculty of Medicine, has announced a new treatment for cancer. It has been heralded by the press as a "cancer



cure." Kingston has turned over part of its municipal hall for the enlargement of his research work and the Department of Health of the Ontario government is collecting cancer tissue from all parts of Canada so that Dr. Connell can use it in making up his preparation. He calls it "Ensol." The background of this performance is said to be some experiments made by Dr. Connell four years ago in an attempt to control cataract. He claims to have developed a substance which would break down cataractous lens tissue without reacting on other proteins. By a similar process, he says he developed an enzyme which would break down cancer tissue. In a letter to *The Journal of the American Medical Association*, Dr. Connell stated that he had promised to submit a complete statement of his work to the *Canadian Medical Association Journal* and requested the American Medical Association to send a representative to witness his results. He also submitted a statement alleged to be an account of the method of preparation of his product and an account of his results, which include merely some regression of cancer tissue. The methods pursued by Dr. Connell in promotion of his product reveals procedures more like those of the charlatan than of the scientific investigator. Moreover, his statement of the method of preparation of his product is so incomplete and confused as to make duplication of his work impossible. The results he claims are similar to those which have been obtained with a half dozen other methods. In a few cases there are apparently temporary remissions due to damage of the blood vessels in the tumor. Results just as good occur with the methods used by most of the cancer quacks. There does not appear to be any real evidence that an antitumor enzyme is present in the mixture. Notwithstanding these considerations, newspapers have heralded widely Dr. Connell's claims. Great numbers of sufferers from cancer have been stimulated to false hopes. Time is the true tester of cancer cures—yet newspapers continue to lead cancer sufferers to promoters of cancer cures that have been tested only a few weeks or months. If Dr. Connell really realized his responsibility he would have waited to inform the newspapers until he knew whether or not

his "discovery" actually had merit. (*J. A. M. A.*, Oct. 5, 1935, p. 1122).

STANDARDIZATION AND LABELING OF LIVER AND STOMACH PREPARATIONS FOR USE IN THE TREATMENT OF PERNICIOUS ANEMIA—The following statement concerning the standardization of liver and stomach preparations has been adopted by the Council: Standardization of preparations depends on the reticulocyte response following the uniform daily administration of the product to a patient with pernicious anemia. The test patient should preferably have no complicating infection, diarrhea, marked arteriosclerosis or extensive neurologic changes. The red blood cell count should be between 1,000,000 and 3,000,000 per cubic millimeter and the patient should not be in a spontaneous or induced remission, nor should transfusion have been performed recently. The patient should not have received potent antianemic material or arsenic within a month. Daily reticulocyte counts for one day before and ten days after the test has been started should be made. During days of marked rise of reticulocytes, two counts a day may be necessary to determine the maximal value. The acceptable standard response is set forth in the accompanying table:

| Initial<br>Red Blood Count<br>Million per Cu. Mm. | Minimum<br>Reticulocyte Response<br>Per Cent. |
|---------------------------------------------------|-----------------------------------------------|
| 1.0                                               | 30                                            |
| 1.5                                               | 18                                            |
| 2.0                                               | 12                                            |
| 2.5                                               | 7                                             |
| 3.0                                               | 4                                             |

The figures given have been obtained by the daily oral administration of material derived from 300 to 400 Gm. of liver, or of 30 to 40 Gm. of desiccated stomach, or by the daily parenteral injection of material derived from 10 to 15 Gm. of liver. The test should be conducted by uniform daily administration for ten days of the least amount of material expected to yield the standard reticulocyte response. Should there be no reticulocyte response or a lesser response than the required minimum, within the ten-day period, that amount of a preparation of established potency known to correspond to the foregoing standards should be administered in uniform

dosage for ten days. The purpose of this control is to establish the reactivity of the patient to known amounts of active principle. In assaying an orally administered product an orally administered standard should be used, and with a product for parenteral use a parenterally administered standard should be employed. The principles underlying the determination of potency of autolyzed liver preparations, stomach tissue extracts or combinations of liver and stomach tissue or extracts are the same. In each case the least daily amount of the preparation administered that is necessary to produce the standard reticulocyte response within the ten-day period should be determined. This daily amount serves as a basis for labeling. Satisfactory responses to similar tests should be obtained in at least three patients.—(*J. A. M. A.*, Oct. 19, 1935, p. 1269).

### Principles of Treatment of Septicemia

In order to analyze the principles of treatment, W. J. Merle Scott, Rochester, N. Y. (*Journal A. M. A.*, Oct. 19, 1935), studied the 311 cases diagnosed as septicemia during the last nine years in the Strong Memorial Hospital and the Rochester Municipal Hospital. The first principle in the treatment of septicemia is the eradication of all foci of infection at the earliest feasible moment. The adequate drainage of all collections of pus under pressure is usually as good care as is possible for the vascular bed in the area of primary infection. If phlebitis of one of the major veins is suspected, exploration should be made and, if found, it must be excluded from the circulation by excision or ligation of the vein. Another adjunct in the treatment that was found helpful and has stood the test of time is the use of blood transfusion to bolster the condition of the patient and particularly to replace destroyed blood in those cases in which anemia has developed. This is so widely accepted now that little need be said in its favor except to warn against the mechanical overloading of the circulation by blood transfusion in the later stages of septicemia or when the cardiac reserve is seriously impaired. It does no good and often hastens the end to give large blood transfusions to moribund septicemic patients. As a supportive measure, however, blood transfusion is of real value. The author believes that the development of immune serums specific for the patient's organism and available early in the course of the septicemia is the most hopeful line of progress at present. He suggests that a committee from the American Medical Association and the Canadian Medical Association be appointed to study this complicated problem.

### BOOK REVIEWS

*Free Medical Care (Socialized Medicine).* By E. C. Buehler, Director of Forensics, University of Kansas. Pp. 360. Cloth. Price, \$2.00. New York: Noble and Noble, 1935.

This fall and winter the university extension course in forensics provides a debate on this topic: "Resolved, that the several states should enact legislation providing for a system of complete medical service available to all citizens at public expense." In addition to many colleges, this debate will include several hundred high schools. It is most unfortunate that such immature minds are to be engaged in a debate that involves as much knowledge, judgment and experience as does this one; this is surely no subject for children. This book is Volume II of the University Debates Help Book, and is a compilation of articles for and against the proposition. In common with the others of its kind, it devotes twice as much space to the affirmative as it does to the negative, on which side, of course, will be found the medical profession. The public is not supposed to know that it takes twice as much argument for the affirmative to balance the argument for the negative, nor can it detect that much of the affirmative material is sophistry, and specious. The consoling thought, however, is that for each high school that espouses the affirmative there must be one for the negative. In space and proportion this book is unfair, and it leaves an erroneous inference concerning the American College of Surgeons; even so, it is better than some of the others, and does assist the debaters, no matter on which side they fight. But it does incite the question: Why don't somebody come out with an honest-to-goodness neutral book? Maybe it can't be done!

*Diet and Die.* By Carl Malmberg. Pp. 149. Cloth. Price, \$1.50. New York: Hillman-Curl, Inc., 1935.

This small volume is a most entertaining expose of diet fads, faddists and frauds. Packed with a lot of valuable medical information, it is so written that the layman, for whom it is intended, can masticate the subject without incurring mental indigestion. Just the book, doctor, to hand to that plump dower patient who is about to go haywire.



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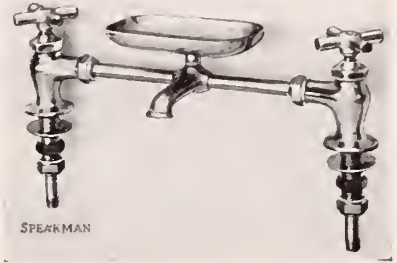


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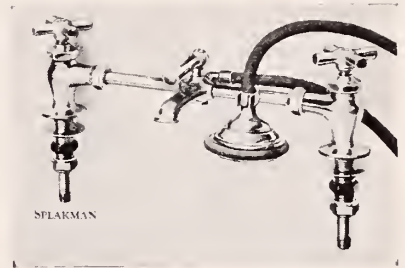
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Again, interest has sometimes been expressed in regard to the nature and purpose of the enamels found in cans in which certain products are packed. These enamels are essentially lacquers

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(1) 1934. Ind. Eng. Chem. 26, 758  
(2) 1932. Ind. Eng. Chem. 24, 650

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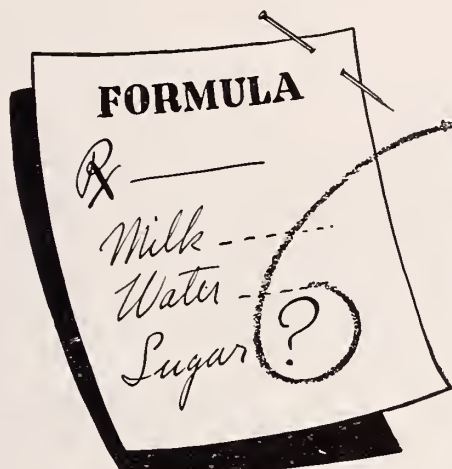
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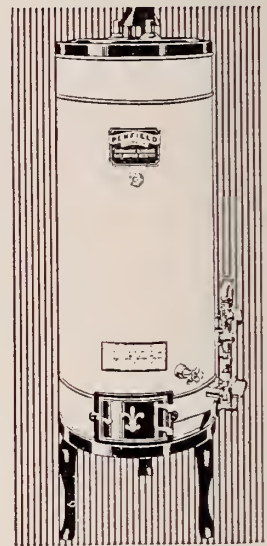
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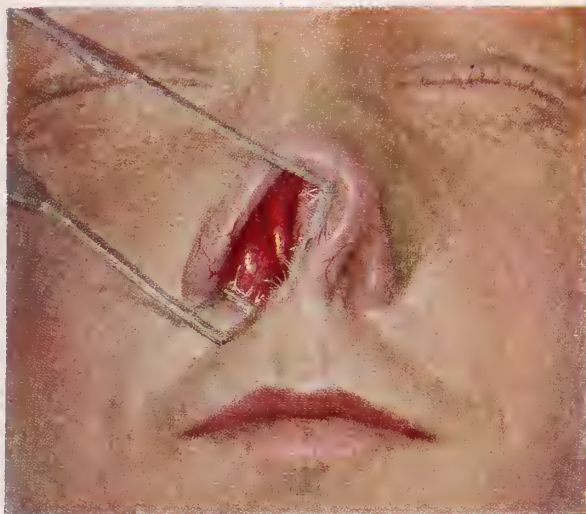
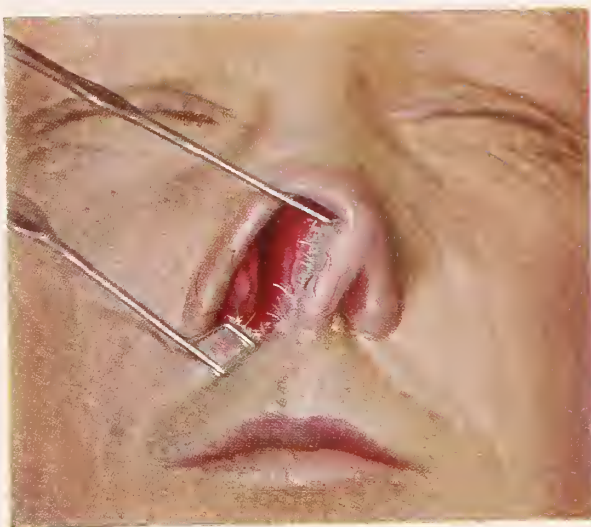


Figure 1—Time, 2:15 p. m. Before treatment.

Figure 2—Time, 2:22 p. m. After using Benzedrine Inhaler.

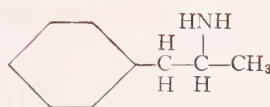


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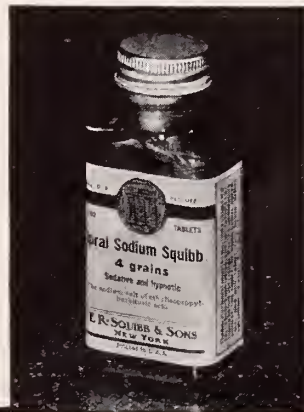
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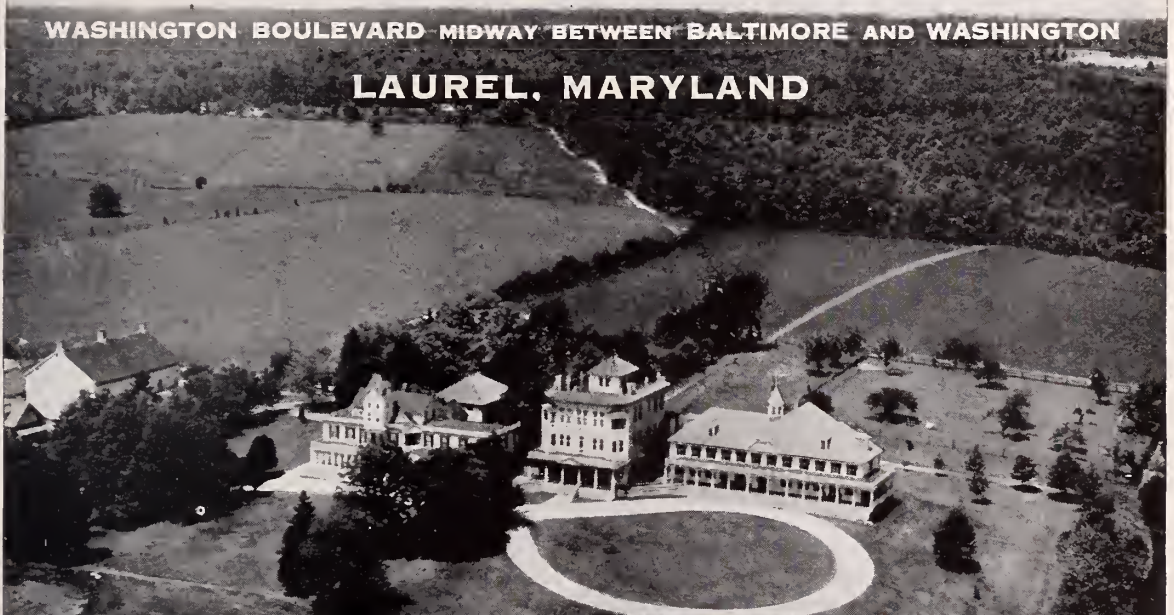


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## MEDICAL SOCIETY OF DELAWARE PROCEEDINGS: 146th ANNUAL SESSION

October 8, 1935

### TUESDAY MORNING SESSION

The One Hundred and Forty-Sixth Annual Session of the Medical Society of Delaware convened at ten o'clock at the Delaware Academy of Medicine, Wilmington, Dr. Jerome D. Niles, President of the Society, presiding.

**PRESIDENT NILES:** We will rise, and the Reverend Dr. Charles Clash, rector of Immanuel P. E. Church, Wilmington, will give the invocation.

**REVEREND DR. CLASH:** O merciful God, Whose Son went about doing good, uphold with Thy strength all who do service to the sick and afflicted. Grant to physicians and surgeons wisdom and skill, sympathy and patience, and we beseech Thee to protect and bless them in all dangers, anxieties and labors, through Jesus Christ, our Lord. Amen.

**PRESIDENT NILES:** We are highly honored this morning in having with us a man who has gained the regard and the respect of the medical profession in a very outstanding manner. He is loved by all of us, and we have asked him to come here and give the address of welcome. I take great pleasure in introducing to you the Honorable C. Douglass Buck, Governor of the State of Delaware.

...The members arose and applauded...

**HON. C. DOUGLASS BUCK:** Thank you very much, Doctor, for those very kind words.

Gentlemen, as Governor of the State, it gives me pleasure to welcome you to the One Hundred and Forty-Sixth Assembly of the Medical Society of Delaware. Yours is a notable Association; for almost one hundred and fifty years, it has held high its ideals, never deviating from the noble traditions of its founders. You have had through the years visions, and have seen these visions become vital realities. In season and out, you have striven for one thing—to more effectively relieve distressed humanity and to bring even greater knowledge and more consummate skill to bear in the great battle against disease and death.

We often think of heroism as confined largely to the field of battle, but in your calling you face danger every day. You are ready at all times to go where disease lurks in grim expectation, to face it boldly, to lay the hand of expert science on the cause of disorder. This is a heroism of service, and as such is the glory of your profession, and if to this service, especially in these late years of dire distress, is added the many, many times you have given of your powers without hope of pecuniary recompense, to the heroism of service must be added an unselfish spirit that reached its reward in the happy knowledge of vital contributions made to the relief of human suffering and the welfare of mankind.

Again, gentlemen, I welcome you to your convention. May your meeting here together bring forth

much helpfulness to all of you, and greatest good to the people of our state. Thank you, very much.

**PRESIDENT NILES:** We will now have the address of the President, on "Medical Ethics, Then and Now." I have attempted to write a paper to present in the form of an address to this Society, and have endeavored to cover what I could of the things that at this time need a little attention. I have tried to pick up the subjects that have most irritated us as far as the smooth running of the medical profession is concerned. I will read a brief history of medical ethics and then gradually come down to the present situation, bringing out the points that I feel might be of interest to us at this time.

...President Niles presented his prepared address, entitled "Medical Ethics, Then and Now" (Printed in THE JOURNAL, October, 1935).

**PRESIDENT NILES:** We will now have the Report of the House of Delegates.

...Secretary Speer read the Report of the House of Delegates as follows:

The House of Delegates of the Medical Society of Delaware met in regular annual session at the Delaware Academy of Medicine on October 7, 1935. President Niles called the meeting to order and the roll was called by Secretary Speer. A quorum being present the meeting was declared open.

On motion the reading of the minutes of the last regular session was dispensed with as they had been printed in THE JOURNAL. The chair then appointed Drs. Mullin, MacCollum and Fooks as a nominating committee. Reports of the President, Secretary, Treasurer and Councilors were read.

The chair then appointed Drs. Voss and Marvel to assist Dr. Booker to audit the books of the Treasurer.

Reports of all of the standing committees were read, followed by those of the special committees, and the Delegate to the A. M. A. The auditing committee reported the Treasurer's report as being correct.

A motion was carried to allow the Committee on Publication to increase the salary of the Editor up to \$500, if the budget was sufficient.

The matter of asking the state to increase the amount allowed by law to the Medical Council was referred to the Committee on Public Policy and Legislation.

A motion was carried to allow railroad fare and \$5 per day to the Delegate to the A. M. A. on his attendance at the regular meeting of the House of Delegates of the A. M. A.

The matter of clinics was discussed and the action taken several years ago concerning the disapproval of the establishment of any more clinics by the State Board of Health was reiterated. It was directed by the House that the Committee on Medical Economics confer with Dr. Jost on this matter of clinics.

A motion was carried that the action of the New Castle County Society in relation to the treatment of pay cases at the Brandywine Sanatorium be approved.

The Nominating Committee submitted the following report (See Transactions: House of Delegates, in this issue):



Resolutions of sympathy were ordered sent to Dr. James Martin, Councilor, of Magnolia.

A motion was carried that all expenses incident to the annual meeting be paid by the Treasurer.

There being no further business, the House adjourned sine die.

PRESIDENT NILES: Is there any discussion of this report?

...There was no discussion of the report of the House of Delegates...

...Upon motion made by Dr. Bird and duly seconded it was voted that the report of the House of Delegates be approved...

PRESIDENT NILES: We now come to the scientific papers. The first item on the program will be a paper on "Urology and the Child." I do not need to introduce this man. He is well known by us all. I take great pleasure in presenting to you Dr. Brice S. Vallett, of Wilmington.

...Dr. Vallett presented his prepared paper, entitled "Urology and the Child," with presentation of cases.

...The discussion on this paper was included with the discussion of Dr. Birdsall's paper which immediately followed...

PRESIDENT NILES: The next paper is entitled "Infections of the Upper Urinary Tract." I take great pleasure in introducing Dr. Joseph C. Birdsall, of Philadelphia.

...Dr. Birdsall presented his prepared paper entitled "Infections of the Upper Urinary Tract," with slides and moving pictures.

The papers of Drs. Vallett and Birdsall were discussed by Drs. L. W. Anderson, R. W. Tomlinson and R. O. Warren.

DR. I. J. MACCOLLUM: It seems fitting to me that the Society should extend to Dr. Vallett and Dr. Birdsall a rising vote of thanks for these excellent papers.

...The members arose and applauded...

PRESIDENT NILES: The next will be a paper by one of our most able local men, one whom we hold in great esteem. His subject will be "Some Angles of Acute Otitis Media." I take great pleasure in introducing to you Dr. Charles P. White, of Wilmington.

...Dr. White presented his prepared paper entitled "Some Angles of Acute Otitis Media," which was discussed by Drs. M. D. La Motte, A. J. Strikol, I. W. Mauerberg, and W. M. Pierson.

PRESIDENT NILES: I want to call your attention to the exhibits on the floor above. All who wish to see them may do so.

...The meeting adjourned at one-twenty o'clock...

**October 8, 1935**

#### TUESDAY AFTERNOON SESSION

The meeting convened at two-thirty o'clock, President Niles presiding.

PRESIDENT NILES: We will now start the afternoon session. We will have a very interesting talk entitled "Diagnosis and Treatment of Brain Tumors," by this most eminent physician, Francis C. Grant, M. D., of Philadelphia.

...Dr. Francis C. Grant presented his prepared paper entitled "Diagnosis and Treatment of Brain Tumors," which was discussed by Drs. M. A. Tarumian and W. E. Bird.

PRESIDENT NILES: I take a keen delight in attempting to introduce the next speaker. I suppose it is from a personal standpoint. Unfortunately I feel as a subject of his in the form of a patient, and he has had free use of all of his abuses during the last year, and I don't think he left out one. He racked my poor carcass from stem to stern with medication and dieting and with advice as to what I should not do until he got me to the stage where life was really not worth living. He got me so mentally perturbed that at a time when I was supposed to make a speech in response to a request of an audience, I was in a stage of what you might call nervous jumpiness, and

a friend said to me, "Jerry, how is your old ulcer?" I said, "It is well. How are all your folks?"

Now we have that man down here. I laid my plans carefully. I have looked ahead to this time, and any form of torture that you men can verbally inflict upon him while we have him here I will thoroughly appreciate.

He is going to talk on "Chronic Ulcerative Colitis—Impressions Gained from a Review of One Hundred Cases." I take great pleasure and keen delight in introducing to you Henry L. Bockus, M. D., of Philadelphia.

DR. HENRY L. BOCKUS: Officers and Members of the Medical Society of Delaware, particularly the Presiding Officer: I appreciate the words of introduction. I am very much afraid that Dr. Niles didn't finish the story. I think probably that after that friend had the few words with him he probably did something he hasn't done for a year, and that may be the reason for the introduction.

...Dr. Bockus presented his prepared paper entitled "Chronic Ulcerative Colitis—Impressions Gained from a Review of One Hundred Cases," which was discussed by Dr. R. W. Tomlinson.

PRESIDENT NILES: The next subject on our program this afternoon will be "Cancer of the Larynx: Its Diagnosis and Surgical Cure," by the most eminent Gabriel Tucker, M. D., of Philadelphia.

...Dr. Tucker presented his prepared paper entitled "Cancer of the Larynx: Its Diagnosis and Surgical Cure," which was discussed by Dr. A. J. Strikol.

PRESIDENT NILES: We are now to hear a very interesting man from Philadelphia whose subject is "Foetal Mortality in Relation of Methods of Delivery." Dr. Norris W. Vaux.

...Dr. Vaux presented his prepared paper entitled "Foetal Mortality in Relation of Methods of Delivery," which was discussed by Drs. Earl Bell, P. R. Smith, L. J. Rigney and Edward Bohan.

PRESIDENT NILES: I can assure you, Dr. Vaux, that this gathering thoroughly appreciates this highly scientific paper in the form of statistics and it reaches a great many of us as general practitioners. I feel your talk has been one of the most important and I extend to you the thanks of this Society.

Now we come to the climax of the day in the form of a paper entitled "Post-operative Complications with Special Reference to Water and Chemical Balance." The man who will present this paper is a man who most graciously has come down here to Wilmington and has lectured to us, time in and time out, to the keen delight and benefit of all of us. I haven't a vocabulary big enough to express our appreciation of this man, from the experiences that we have had in the past. I take great pleasure now in introducing to you Dr. Damon B. Pfeiffer, of Philadelphia.

DR. DAMON B. PFEIFFER: Mr. President and Gentlemen: I wish to express my keen appreciation of the honor of being with you and also my pleasure in participating in this program which I have found so interesting personally.

...Dr. Pfeiffer then presented his prepared paper entitled "Post-operative Complications with Special Reference to Water and Chemical Balance," which was discussed by Drs. O. S. Allen, R. W. Tomlinson, R. O. Warren and B. G. Vallett.

PRESIDENT NILES: Dr. Pfeiffer, again you have delighted us with a most excellent scientific paper, and as I have said before, any words that I might say will not demonstrate the appreciation this Society has for your effort. Thank you.

This will close the meeting for today.

...The meeting adjourned at six-fifteen o'clock...

**October 9, 1935**

#### WEDNESDAY MORNING SESSION

The meeting convened at ten-fifteen o'clock, President Niles presiding.

PRESIDENT NILES: I am sorry to announce that

Dr. John A. Kolmer is unable to be here today due to an engagement he had, in Milwaukee I believe, making it impossible for him to be with us. We are taking his hour to have a meeting of the House of Delegates and finish up what official business we have to dispose of. Dr. Speer wishes to read Dr. Kolmer's letter. I had a good deal of telephone conversation with Dr. Kolmer and he was in a peculiar position as far as coming here was concerned. I know down in his heart his desire was to be with us.

SECRETARY SPEER: This letter is dated March 26th. He says,

"I greatly appreciate your kindness in extending to me an invitation to give a paper before the annual meeting of the Medical Society of Delaware at Wilmington, October 7th to 9th. I am greatly interested in vaccination against infantile paralysis and would like to speak on that subject during the afternoon of October 9th. The probable title will be 'Immunity and Vaccination in Acute Poliomyelitis.' I would need a lantern for slides and may have a motion picture film if it will be possible to show it. Please be sure to write me as the time approaches, as I have a lot of engagements."

We wrote him that his paper was scheduled for Wednesday, October 9, 1935, at eleven-twenty a. m., which he accepted, and then at a later date he said that because of his engagement in Milwaukee it would be impossible for him to get here until the afternoon. So that is the reason Dr. Kolmer will not be here. Of course, it was too late at that time to supply a substitute. I tried to, but was not successful in getting any one, due to the fact, I believe, that the pediatricians have a meeting in Philadelphia next week and the man that I wanted to substitute is reading a paper on the same subject before the Pediatric Society and therefore he couldn't come down and give the paper here.

PRESIDENT NILES: In that letter he stated he could not be here until afternoon. What time in the afternoon did he mean, or did he intend coming at all?

SECRETARY SPEER: He said he would like to give it in the afternoon, and later on he wrote and said he would be here in the morning, and then he got in touch with you and said he couldn't get back until later in the afternoon.

PRESIDENT NILES: I thought when he got in touch with me it had been arranged for him to be here.

SECRETARY SPEER: It had been. He told us he would be here in the morning, and then later on he said he couldn't be here until afternoon, but by that time it was too late to get a substitute.

PRESIDENT NILES: We are changing the speakers around a little this morning. Whereas Dr. B. M. Allen was supposed to go on now, we are going to put in his place Dr. Charles C. Wolfarth, of Philadelphia, and will ask Dr. Allen to come last. Dr. Speer is out now hunting Dr. Wolfarth.

I might say that in my conversation over the telephone with Dr. Kolmer I could readily see he was very anxious to be with us and it was only transportation schedules that have kept him away.

We have with us this morning a very worthy man of Philadelphia who will talk on "The Diagnosis of Coronary Arteriosclerosis and Its Complications," which I know will be most interesting to all of us. I take great pleasure in introducing to you Dr. Charles C. Wolfarth, of Philadelphia.

DR. CHARLES C. WOLFARTH: Mr. President, Members of the Medical Society of Delaware: I take great pleasure in coming before you to speak this morning. It is an honor that I appreciate very much.

...Dr. Wolfarth then presented his prepared paper entitled "The Diagnosis of Coronary Arteriosclerosis and Its Chief Complications," which was discussed by Drs. O. S. Allen and R. W. Tomlinson.

PRESIDENT NILES: We all know this is a new era as far as heart diseases are concerned. It will take a little time before we can justly appreciate the advances that have been made recently in cardiology. But I can assure you, Dr. Wolfarth, that I voice the sentiment

of this Society in the extreme appreciation of your effort, and I feel that it is of great importance that we take cognizance of the progress along these lines. I again thank you for the presentation of your paper.

A few minutes ago I was somewhat startled and chagrined to see the influx into this room of a number of husky looking policemen. I turned to the man sitting beside me, reflecting perhaps on the things I had been doing last night (laughter), and I wondered if it was a riot call. But after talking with our Secretary, who seemed to be a close friend of this man who has always shown a tendency to lean toward the police department, I don't know why, but nevertheless I have been reconciled to the fact that Dr. H. R. Owen, of Philadelphia, a noted police surgeon, has come down here to talk to us on the subject, "Closed Versus the Open Reduction of Fractures." Just whether these men are his bodyguards or not I don't know, but during the course of his lecture no doubt we will find out. I take great pleasure in introducing Dr. Hubley R. Owen.

DR. HUBLEY R. OWEN: Mr. President and Members of the Medical Society of Delaware: I, too, appreciate very much having been asked down here to discuss the conservative versus the radical treatment of fractures. I hope you are not all cardiologists. I often have some hesitancy in presenting this question of fractures to a gathering such as this in Wilmington, or occasionally in Lancaster or Reading, because I think it is more or less like the old saying—carrying coals to New Castle—because you surgeons here in Wilmington and these cities along the main highways really see more serious fractures than we do in the city hospitals in Philadelphia. However, in my association with these policemen and firemen in the past twenty-nine years we have had a considerable number of fractures.

...Dr. Owen then presented his prepared paper, "The Conservative Versus the Radical Treatment of Fractures," presenting cases and lantern slides, which was discussed by Drs. J. L. Flinn, James Beebe and J. C. Pierson.

PRESIDENT NILES: I consider this paper very delightful reading, and I want to voice the sentiment of the Society in thanking you kindly for your effort and showing our appreciation for the same.

As has been our custom we have saved the best for the last. I don't need to go into detail as to the ability of the next speaker. We all know that he is an outstanding man in the profession in the state of Delaware. I take great pleasure in introducing to you Dr. B. M. Allen, of Wilmington. His subject will be "Some Uncommon Bone Lesions." Dr. Allen!

...Dr. Allen then addressed the Society, presenting lantern slides. His remarks were discussed by Dr. G. C. McElpatrick, Ira Burns, and Dr. L. Flinn.

PRESIDENT NILES: You may have noticed during this convention that in thanking the "foreign" speakers, I laid stress upon the great knowledge which they have transmitted to us. But the cardinal thing in our whole convention, in my estimation, this year has been the papers that have been rendered by our local men. If you noticed, our men have gotten up here and given their papers without reading them, except myself, and I am glad to be the exception. And every one of these local papers has been extremely instructive to us who live in the community. I am not in any way discounting the value of the "foreign" papers which have been presented, but I do want to bring out the ability of the men that we have in our own community.

We now come to the important part, the grand finale of the convention. We have two things in order; the election of the President, and rededication on the place for the meeting of the next convention.

We will now proceed to the nomination and election of the incoming President. The next President,



I understand, will come from Sussex County, and I will accept nominations from those delegates.

DR. JAMES BEEBE: I desire to place in nomination Dr. Joseph B. Waples.

...The nomination was seconded by Dr. Fooks...

PRESIDENT NILES: Dr. Waples has been nominated by Dr. Beebe. Are there any further nominations?

...Upon motion regularly made and seconded it was voted that the nominations be closed...

DR. C. J. PRICKETT: I move the Secretary be instructed to cast the unanimous ballot of the Society for Dr. Waples.

...The motion was seconded, was put to a vote and carried...

SECRETARY SPEER: The ballot has been cast.

PRESIDENT NILES: I now want to ask Dr. James Beebe to escort the incoming President to the Chair.

...President-Elect Waples was escorted to the Chair...

PRESIDENT-ELECT WAPLES: Mr. President, Gentlemen: I did not seek this office, and I think that you made a very bad choice. Having made your mistake, the only way to rectify it, I believe, is for every man to get on the wheel and help me through this year. If each of you will do that, I believe we will have a successful year; without that, I don't know, I won't promise.

PRESIDENT NILES: I won't take more than a few minutes of your time now, but I do feel it behooves the outgoing President to make a few constructive criticisms, and perhaps thank all of the members of the Society that have cooperated in making this convention a success. The cardinal things that I have in mind concerning the success of a convention is, first, the cooperation of all heads of the committees with the Secretary, the cooperation of the President with the Secretary, and the cooperation of the Secretary with the President. These are vital things in the success of our Medical Society and its conventions. We have these yearly conventions, men sacrifice and make great effort to come here to gain from the scientific papers that are rendered. Subsequently it behooves those who are on the Program Committee to have the best that can be procured, and it takes time and money and thought to get these men. There is a great deal of red tape, and you have to begin early in the year to accomplish this. When I was ushered in as President of this Society I didn't realize the full importance of that and I let several weeks pass by before I was jolted by the criticism of our most gracious Secretary, who all of the time has his finger on the pulse of this organization.

I want to compliment Dr. Speer on the conscientious work that he does. He is not void of criticism and perhaps I could criticize him severely, but I am in too lenient a mood this morning to do so. (Laughter) If I did, it would only be constructive criticism and I can vouch that Dr. Speer would accept that criticism with much grace. I don't believe we have ever had a man more conscientious in his endeavor to keep this Society up to par than Dr. Speer.

As the incoming President takes charge, he must start his program at once because of the great importance of it, more so in these times than in the past. As you read you realize that the decisions that we make here are watched carefully by the laity in these times. During the past five years of this depression the medical profession has been watched with keen interest by this country, and we are in a critical condition at this time. We don't know just what the outcome will be in the future, and it behooves every member of the organization, not only the President and the Secretary, but every member to cooperate in every detail with what should be going on here.

I must in modesty dwell a little on what has been accomplished. In the first place, it has been very de-

lightful to me. I feel that becoming President of the Medical Society of Delaware is a peak that every man who is a real physician is desirous of attaining. It is an honor of the greatest importance to every man in the state. I fully realize that. The height of my ambition was to become President of the Medical Society of Delaware. There isn't another state in the Union that I would prefer more than this state, and I appreciate the honor that has been mine. I am sure that the incoming President will appreciate it.

There is one thing that I have noticed we have brought out. By bold constructive criticism I don't believe I have made an enemy, but I do know, by the kindly sentiments and compliments that have been extended to me by my colleagues, if they are sincere, and I know they are, there have been many and they have been appreciated by me, that more fraternalism has been instituted this year than in many years of the past. Men seem to know each other better. There is less petty jealousy in the whole profession. Men are differentiating and taking into consideration the acts of their colleagues. As Percival says, when you have a constructive criticism to make of a colleague make it to him, and if he is a good man he will accept it in the manner in which it was given. I feel that that principle is growing upon us more every year. The sneaky, pussyfooting propaganda among doctors is fast going. The schoolboy method of criticizing behind the back to each other is going. We are more open and aboveboard and lay our cards on the table at these executive meetings, fighting it out and having it accepted properly.

The little experiences that we have had socially also have grown in magnitude. We have had dinners and I have noticed that the fellowship is increasing. The smiles on the faces of those that have been serious during the past five years of depression have begun to come back, and the little flicker around the eyes showing contentment and satisfaction is coming back. It is one of the most important things to bring back the old and happy times before the depression.

In closing what few words I have said that might be of value, I want to thank you from the bottom of my heart, and seriously assure you that I go from here holding this honor as one of my most esteemed souvenirs of my past. I thank you.

DR. G. C. McELPATRICK: Mr. President, there is one little thing I would like to mention; I won't keep you long. We have missed among our ranks this year one man whom I think we all respect. I believe on account of sickness he is not able to be here. He is a man who has worked loyally for thirty-five years or more. I would like to move you that the Secretary be instructed to write a letter to Dr. Bastian telling him how much we have missed him this year and hoping that he has a speedy recovery.

...The motion was seconded by several members...

PRESIDENT NILES: Should there not be included in that the other men who were unable to be here on account of sickness?

DR. M. A. TARUMIANZ: Dr. William P. Orr and Dr. Joseph Martin and Dr. Willard E. Smith.

PRESIDENT NILES: Are there any others that should be remembered by us?

...The motion was put to a vote and carried...

DR. TARUMIANZ: I move that the Society give a rising vote of thanks to the President and the Secretary for their efforts and conscientious work during the past year.

...The motion was seconded and the members arose and applauded...

DR. W. E. BIRD: So long as these motions seem to be the spirit of the hour, I move that the Society extend to the Delaware Academy of Medicine a rising vote of thanks for their generosity in giving us this place for our meeting.



...The motion was seconded and the members arose and applauded...

PRESIDENT NILES: If there be no further matters to come before the meeting, I declare the 146th Annual Session of the Medical Society of Delaware adjourned.  
...The meeting adjourned at 1 p. m....

## MEDICAL SOCIETY OF DELAWARE TRANSACTIONS: HOUSE OF DELEGATES, 1935

October 7, 1935

The meeting of the House of Delegates of the Medical Society of Delaware convened at the Delaware Academy of Medicine, Wilmington, Delaware, at nine o'clock, Dr. Jerome D. Niles, President of the Society, presiding.

PRESIDENT NILES: Gentlemen, I take great pleasure in calling to order the One Hundred and Forty-Sixth Annual Session of the Medical Society of Delaware.

We will now have the roll call.

...Secretary Speer called the roll...

...Upon motion regularly made and seconded it was voted to seat Dr. Prickett as a delegate from Kent County...

SECRETARY SPEER: A quorum is present.

PRESIDENT NILES: Our first order of business is the reading of the minutes of the last session.

DR. W. E. BIRD (Wilmington): I move the reading be dispensed with, as the minutes have been published in THE JOURNAL.

...The motion was seconded, was put to a vote and carried...

DR. BIRD: What about the members regularly seated as delegates?

SECRETARY SPEER: We have a quorum without the alternates.

DR. BIRD: But, Mr. Chairman, New Castle County is entitled to thirteen delegates and the alternates were elected to take the place of those who were absent. In other words, we are entitled to thirteen. If we have only six regulars present we are entitled to seat the first seven alternates.

DR. I. J. MACCOLLUM (Wyoming): I move that the alternates for those specific delegates who are absent—

DR. BIRD: They were not named specifically.

DR. MACCOLLUM: I move then they be seated alphabetically to make up the required number of delegates from New Castle County.

PRESIDENT NILES: Ten members make a quorum.

SECRETARY SPEER: Ten members of the House of Delegates constitute a quorum. It doesn't make any difference where they come from.

DR. BIRD: We are not questioning the quorum. The point is that as many seats as each county society is entitled to have should be filled as far as possible.

SECRETARY SPEER: It is all right if you want to do it, but we have a quorum.

PRESIDENT NILES: We have a quorum right now and I think it is in order to proceed.

DR. BIRD: There is a motion, Mr. Chairman.

PRESIDENT NILES: What was your motion?

DR. MACCOLLUM: I move that the alternates for the absent delegates from New Castle County be selected in alphabetical order to make up the required number of delegates from New Castle County.

It doesn't make so much difference in regard to the quorum, but it might make a difference in the voting on any important question that might come before the House of Delegates.

...The motion was seconded, was put to a vote and carried...

SECRETARY SPEER: The first absent member in New Castle County is Dr. Butler. Dr. Earl Bell is here as

an alternate, so according to the motion Dr. Bell will fill Dr. Butler's place.

The next absent member is Dr. L. J. Jones. Dr. Ira Burns will fill Dr. Jones' place.

Dr. Parsons is the next absent member. Dr. Heitefuss is the next alphabetical alternate, so he will fill Dr. Parsons' place.

Dr. Rigney is not present, and Dr. McElfatrik will fill his place.

Dr. Swinburne is absent, so Dr. L. D. Phillips will fill his place.

That is all of them and you now have a complete number.

...The House was then officially composed of the following members:

President, J. D. Niles; Secretary, W. H. Speer; Councilor, Lewis Booker; Delegates from New Castle County: Earl Bell, W. E. Bird, Ira Burns, J. L. Chipman, D. T. Davidson, I. L. Flinn, A. L. Heek, H. L. Heitefuss, G. C. McElfatrik, J. W. Mullin, L. D. Phillips, R. W. Tomlinson and J. P. Wales; Delegates from Kent County: I. T. MacCollum, I. W. Mayerberg, and C. J. Prickett; Delegates from Sussex County: C. J. Fooks, K. J. Hocker, and James Marvil.

PRESIDENT NILES: The next in order is the appointment of the Nominating Committee. I take pleasure in appointing from Sussex County, Dr. Carlton Fooks. From Kent County I will appoint Dr. I. J. MacCollum. And from New Castle County I will appoint Dr. John Mullin. They may retire at this time and prepare their nominations for officers for the coming year.

The next order of business is the Reports of Officers. First on that list will be that of the President.

### Report of the President

It has been a rather uneventful year. Nothing along the lines of legislation has particularly annoyed the Medical Society of Delaware. The watchdogs of that part of our affairs, in the form of the Legislative Committee, have acted very efficiently.

I have visited the Society of Sussex County and I was much impressed by one visit that I made at Georgetown by the activities of that Society and the interest taken in their programs. I think Dr. Vallett was there that evening and gave a very interesting address. I took with me several members from the different sections of the state and we were treated with great courtesy and enjoyed the evening immensely. I also attended a meeting of the Kent County Society at Smyrna, and they, too, were very active. They seemed to be well versed on all current topics and you can well see that they are abreast with the advancement of medicine at these times.

We have had a special meeting of the House of Delegates, where we had an interesting discussion of group hospital insurance. No definite steps were taken as to the result of that discussion.

We had a special meeting with the State Board of Health, headed by Dr. Jost, to discuss the Social Security Act. At that meeting we demonstrated our approval by ordering the Secretary to write a letter to that effect.

The attendance of the Medical Society of Delaware was very gratifying at the meeting of the American Medical Association in Atlantic City. I think they derived a great deal of good, particularly along the lines of legislation, in hearing the remarks of United States Senator Edge, who urged us to take more interest in politics, that we might save the scientific structure of medicine by blocking all moves of political exploiters.

I do not think there is anything more of importance that has occurred through the year. I have thoroughly enjoyed being President of this Society. The one thing that I have been most anxious about, the one thing that seemed to impress me most at the

beginning of my present term, was the fact that we needed better attendance, and I feel, from the response that I have received from personal letters which I sent out to each and every member of this Society, that we should and will have the best attendance at this medical convention that we have ever had. I thank you.

We will now have the report of the Secretary.

...Secretary Speer read his report as follows:

#### Report of the Secretary

The Secretary's office has very little to report other than what you have seen in THE JOURNAL. There has been the routine series of letters and questionnaires which come in from different sources, and these were answered as they required.

Nearly all of this correspondence was in some way connected with the relief question, sickness insurance, old age pensions, or the social security act. New York State Medical Society has a very active publicity organization and several articles were received from this source with a request to publish them in the local papers. As the questions touched upon did not directly coincide with our problems in this state, your Secretary did not publish them.

The Council approved a salary of \$30 per month to the Editor of THE JOURNAL, as was passed unanimously at the last regular meeting in Dover.

The Library acknowledged the ledger which was given to them by this body at its last regular session.

As you will see from the report of the Committee on Scientific Work, our present program was completed by April 30th.

This constitutes the activity of this office.

There have been two special meetings of the House of Delegates. The first one was called by the President, and was held in the Hotel Du Pont on April 9, 1935.

The meeting was called to order by the President and the rollcall showed the following to be present:

Drs. Niles, Prickett, Heck, Booker, Wagner, J. H. Mullin, Bird, McElfatriek, Samuel, Vallett, P. R. Smith, Tarumianz, Barsky, Butler, I. W. Mayerberg, Chipman, Davidson, I. M. Flinn, Parsons, Swinburne, Tomlinson, Anderson, Bell, Burns, Heitefuss, E. R. Miller, Keyser, Phillips, MacCollum, Speer.

The first matter brought up was that of group hospitalization. It was presented by Mr. Maybee, of Washington, D. C., who explained that 40 cities now have this type of hospitalization, and that 43 hospitals in greater New York have it. Under this plan, bed, board and routine care are included, the service being given in a semi-private room. The patients can only be admitted by a physician, but the professional services are not included in this plan. Many medical societies have approved this. The money is paid into a central corporation, which disburses to the hospitals.

The service is usually for 21 days per year, and beyond that a discount is given. After hearing Mr. Maybee, Dr. Bird moved that we approve the principle of group hospitalization, provided that any plan adopted adequately safeguarded the rights and privileges of the medical profession. This was seconded by Dr. MacCollum and passed unanimously.

The next matter discussed was that of sickness insurance. The action of the House of Delegates of the American Medical Association at Chicago, February 15th and 16th, 1935, in this matter was approved.

It was moved and seconded that the Committee on Medical Economics take action on question 6, which is:

"How may the American Medical Association initiate plans for still further improving the quality of medical service and for obtaining better distribution of medical service for all the people?"

A letter containing this motion was submitted to the Committee.

The next thing which was discussed was that of the reports of committees. The report of the Hospital Committee was discussed, but no action was taken. The report of the Committee on Medical Education was given and the following resolutions were adopted to be submitted to the Medical Council for their consideration.

1. That internship should be increased to 2 years.
2. That reciprocity should be on the basis that anyone wishing to reciprocate, must have the same general average as required of those taking the examination in this state, namely 80%, and must have had the required 2 years internship.

3. That the reciprocity fee be raised to at least \$200, and the examination fee to \$50.

These resolutions were sent to the Medical Council for their consideration.

The next report discussed was that of the Committee on Criminologic Institutes and it was moved that paragraph 2 of the report submitted by this committee be complied with.

It was properly moved and seconded that the expenses incident to this meeting be paid by the Treasurer.

There being no further business, the meeting adjourned at 6 p. m.

The second special meeting of the House of Delegates was held at Bay View, on August 21, 1935. This meeting was called by the President for the purpose of discussing the Social Security Act and to hear it explained by Drs. Jost, of the State Board of Health, and Murray, of Washington, D. C.

Those present were: Drs. Niles, Heck, Bird, Bell, Keyser, McElfatriek, Hoeker, Wales, Tomlinson, Butler, Bastian, Phillips, E. Miller, I. Flinn, Davidson, Anderson, Wagner, Speer, and I. Mayerberg.

Dr. Jost was introduced by President Niles, and the service of the Social Security Act as related to Delaware was explained, involving special work in child welfare and prenatal care. Dr. Jost said that it was the intention also to have a special course of instruction given in Kent County provided the Kent County Medical Society was in favor. It was his intention to have a meeting of this Society called so that it could be explained to them, and also he asked that there be present representatives from New Castle County and Sussex. The appended schedule shows what is proposed in Delaware as to personnel and salaries to be paid. (Exhibit No. 1, can be obtained from the State Board of Health.)

Dr. Murray was then introduced by Dr. Jost and she enlarged on the service of the special program in Kent County. (Program appended as Exhibit No. 2, can be obtained from the State Board of Health.)

Following Dr. Murray's talk there was spirited discussion on the projects by Drs. Bird, Bastian, Wales, Niles, and Keyser. Dr. Wales then moved that "as long as Delaware, in our opinion, is self-sufficient and able to take care of its own people when it concerns matters of health, we refuse any Federal aid at the present time." This was seconded by Dr. Bastian. Discussion on the motion was voiced by Drs. Keyser, Niles, Speer, Jost, and Wales. The motion, on being put to vote, was lost. Dr. Bird then moved that the program be approved in principle. This was seconded by Dr. Heck and carried unanimously.

The question of personnel was then brought up and it was the unanimous feeling of the House that the proposed personnel for this work could be secured in Delaware, and it is hoped that the State Board of Health will consider the request that this policy be adhered to. Dr. Keyser then moved that all the expenses incident to this meeting be paid by the treasurer of the Society. This was seconded and passed. The meeting was then adjourned.

Respectfully submitted,

W. H. SPEER.



SECRETARY SPEER: As far as that meeting in Kent County goes, I do not know whether it has been called or not. I personally haven't had any notice of it.

DR. C. J. PRICKETT (Smyrna): It has not been called as yet.

SECRETARY SPEER: Has anything been sent to Kent County as yet?

DR. PRICKETT: The appropriation wasn't necessary to have a meeting. Dr. Jost had the appropriation. A committee of six was appointed to discuss with Dr. Jost the basic outline and elaborate on it.

PRESIDENT NILES: But that meeting has not been called?

DR. PRICKETT: The committee has not met.

SECRETARY SPEER: It is very interesting to note that the proposed schedule of salaries gives \$2660 to a colored nurse and only \$1560 to a county nurse.

PRESIDENT NILES: It is a typographical error because we discussed that before. It is \$1860.

...Secretary Speer then finished reading his prepared report, closing with the following remarks:

I would like to suggest the appointment or election of an assistant secretary, the object being for one secretary to serve five years and the assistant then to take his place.

PRESIDENT NILES: That point would perhaps better be taken up under the heading of new business.

SECRETARY SPEER: All right, we can do that.

PRESIDENT NILES: We will now hear the report of the Treasurer, Dr. Heck, of Wilmington.

...Dr. Heck read his prepared report, as follows:

#### Report of the Treasurer

##### GENERAL FUND

October 8th, 1934—Balance Forwarded ... \$ 515.79

##### Receipts

|                                                   |          |
|---------------------------------------------------|----------|
| Dues—New Castle County (129) ..                   | \$645.00 |
| Dues—Kent County (27) .....                       | 135.00   |
| Dues—Sussex County (29) .....                     | 145.00   |
| Dividends: Bank Stock .....                       | 56.00    |
| Exhibition Spaces .....                           | 20.00    |
| From Delegates for dinner (special meeting) ..... | 24.00    |

1,025.00

Total ..... \$1,540.79

##### Disbursements

|                                    |          |
|------------------------------------|----------|
| Subscriptions to the Journal ..... | \$370.00 |
| Annual Session .....               | 187.72   |
| Medical Defence Fund .....         | 185.00   |
| Medical Stenography .....          | 135.10   |
| Secretary's Supplies .....         | 40.00    |
| Printing and Postage .....         | 21.25    |
| Special Meetings (2) H. of D. .... | 61.81    |
| Flowers .....                      | 5.00     |
| Badges for annual session .....    | 13.00    |
| Tax on checks .....                | .40      |

\$1,019.28

Oct. 7th, 1935, Balance on hand ..... \$ 521.51

##### DEFENCE FUND

Oct. 8th, 1934—Balance Forwarded ..... \$3,299.42

##### Receipts

|                              |          |
|------------------------------|----------|
| Dues, per capita .....       | \$185.00 |
| Interests, on deposits ..... | 114.83   |

299.83

October 7th, 1935—Balance on hand ..... \$3,599.25

Respectfully submitted,

A. LEON HECK.

PRESIDENT NILES: The next report will be that of the Councilors.

#### Report of the Councilors

DR. LEWIS BOOKER (New Castle): There has been no business which has come before the Councilors the past year.

PRESIDENT NILES: At this time there is only one councilor here, Dr. Booker.

I want to appoint Dr. Voss and Dr. Marvil and Dr. Booker to audit the books of the Treasurer.

We will now have the reports of the Standing Committees. The first will be that of the Committee on Scientific Work.

...Secretary Speer read the report of the Committee on Scientific Work, as follows:

#### Report of the Committee on Scientific Work

Your Committee on Scientific Work began early in the spring to formulate the program for this current meeting. We had all of the speakers' acceptances and titles of their papers in by April 30th. No replies came in from the members of Kent or Sussex to our request for papers. The committee tried to have as interesting subjects as possible, and I hope we have succeeded.

The main question was to decide on Tuesday night's activities. A public meeting was discussed, as to whether more good would come to the Society as a whole by such a meeting, in contrast to a meeting of our members so we could have a social evening to ourselves. The banquet was finally decided upon as being of more good to the Society. The question of having anyone but members was decided in favor of members only and as you know, the ladies are our guests at Loew's Theatre.

The question of having an extra room in the hotel for social purposes was decided as not being for the best interests of the Society.

The regular luncheons by the County Society and the joint luncheon with the Auxiliary are to be held as always.

We hope this meets with your approval.

Respectfully submitted,

W. H. SPEER.

PRESIDENT NILES: We will now have the report of the Committee on Public Policy and Legislation. Dr. John Mullin, who has been acting as chairman of that committee, is not present, and by some error or oversight of the Nominating Committee last year, I was made chairman of the committee.

#### Report of the Committee on Public Policy and Legislation

The committee has had very little to do this year. Once or twice we were somewhat startled by reports sent in by the American Medical Association that an attempt was going to be made to run a certain bill through our Legislature, but after getting in touch with the Speaker of the House, Mr. Maloney, through Dr. Mullin, we killed the bill, which had to do, I think, with beauticians. Outside of that nothing has disturbed us along the lines of legislation. They had embodied in their bill the privilege of treating skin diseases. We put up a protest, and they rewrote the bill.

We will now have the report of the Committee on Publication, by Dr. Bird.

...Dr. Bird read the report of the Editor, as follows:

#### Report of the Publication Committee

As heretofore, we transmit herewith the report of the Publication Committee in two sections: (1) that of the Editor, and (2) that of the Business Manager.

##### REPORT OF THE EDITOR

We are nearing the close of Volume VII of the New Series, and despite the handicap of the economic stress of the times, we have maintained the usual standards of our JOURNAL in size and character. We



have continued to receive the approval of our confreres in other states, and at the national headquarters.

We have published all the transactions and papers of this Society, as well as some of those read before county societies. Our plea of last year for more scientific papers as contributions from our own members has been productive of several papers of merit, which have also been published. We have at last reached that editorial Elysium where we may make appropriate selections without fear of the cupboard being bare.

Your Committee has functioned harmoniously, and the same spirit has animated all the activities of the printers, to whom we extend our thanks for their never-failing courtesy. Since they also publish the only Sunday newspaper in Delaware, we have been gratified to see them reprint many of our editorials and other papers in their paper, thus widening the influence not only of THE JOURNAL but of this Society.

We take this occasion, as Editor, to thank our constituency for their assistance and cooperation. With the December issue of THE JOURNAL we shall have completed twenty years as Editor. This establishes no American record, but it has provided a continuity of effort, a singleness of purpose, and a standard of journalism of which our Society, small though it be, may be reasonably proud.

Respectfully submitted,

W. EDWIN BIRD

DR. BIRD: Mr. Chairman, the report of the Publication Committee is in two sections. Dr. Tarumianz has the report of the Business Manager and I move he be given the privilege of the floor.

...Dr. Tarumianz read the report of the Business Manager, as follows:

#### REPORT OF THE BUSINESS MANAGER

Oct. 8 1934 to Oct. 7, 1935

Savings Account, Oct. 8, 1934, Wil. Trst Co. \$4,046.60  
Checking Account, Oct. 8, 1934, Wil. Trust Co. 373.39

Total ..... \$4,419.99

#### Receipts

Advertisements ..... \$2,287.43  
Refund on cuts ..... 23.75  
Refund, Periodical Publishers Institute ..... 2.34  
Rebate on ads from Am. Med. Assn. 74.39  
Subscriptions, Medical Society members ..... 370.00  
Single copy sales ..... 2.68

Total Receipts ..... \$2,760.59

#### Disbursements

Printing and mailing Journal ... 2,094.08  
Miscellaneous postage ..... 8.00  
Envelopes printed ..... 45.00  
Salary of Editor (since Dec. 1934) 300.00  
Notary fees ..... 1.50  
Binding Journals ..... 9.00  
Cuts ..... 36.25  
Membership, Am. Med. Editors' and Authors' Assn. .... 21.00  
Convention, A. M. E. & A. A. .... 48.66  
Salary of Stenographer ..... 76.00  
Tax on checks ..... .06

Total Disbursements ..... \$2,639.55

Operating Balance ..... \$121.04  
Interest on Sav. Acct. .... 115.76

236.80

Total, Oct. 7, 1935 ..... \$4,656.79

In Savings Account, Wil. Trust Co.,

Oct. 7, 1935 ..... \$4,362.36

In Checking Account, Wil. Trust Co.,

Oct. 7, 1935 ..... 294.43

Total Balance ..... \$4,656.79

Still due from advertisements, approximately ..... \$252.14

SUMMARY for 6 yrs. 10 mos.  
(Jan. 1929 to Oct. 7, 1935)

#### Receipts

Advertisements ..... \$15,233.50  
Subscriptions, Medical Society Members ..... 2,444.00  
Subscriptions, others ..... 230.00  
Rebates from Am. Med. Assn. ... 656.70  
Rebates on cuts ..... 78.53  
Single copy sales ..... 10.48  
Refund, Periodical Publishers' Institute ..... 2.34

\$18,655.55

Interest on Savings Account ... 495.19

\$19,150.74

#### Disbursements

Printing and mailing Journal .. \$12,658.49  
Miscellaneous postage ..... 63.80  
Stationery ..... 319.13  
Notary fees ..... 6.75  
Stenographic services ..... 436.86  
Membership, Am. Med. Editors' and Authors' Assn. .... 120.00  
Membership, Periodical Publishers' Institute ..... 10.00  
Reprints ..... 20.30  
Salary of Editor ..... 300.00  
Binding Journals ..... 36.00  
Tax on checks ..... 1.90  
Convention expenses ..... 198.66  
Editorial expenses ..... 37.00  
Repairing cuts ..... 6.12  
Cuts ..... 144.02  
Editors' Convention ..... 134.92

14,493.95

\$ 4,656.79

Respectfully submitted,

M. A. TARUMIANZ, M. D.

DR. TARUMIANZ (Farnhurst): May I have a word or two in this connection, Mr. President? I would like one of the members of the House of Delegates to present a motion to this body that the Publication Committee be authorized to increase the salary of the editor up to \$500 a year if the funds will permit us to do so. At the present time the salary is \$30 a month.

PRESIDENT NILES: Is that a motion or a suggestion?

DR. TARUMIANZ: A suggestion.

DR. PRICKETT: I move the salary of the editor of THE JOURNAL be \$500 per year when the funds will permit.

DR. TARUMIANZ: No, I say authorize the Publication Committee to have the power to increase it to \$500 in case there are funds to do so; that is, if the balance will allow us to do so.

DR. I. L. CHIPMAN (Wilmington): I am not opposed to the motion but it is not regular. It should come under new business.

DR. TARUMIANZ: It shouldn't come right now but I am suggesting it.

PRESIDENT NILES: We will take up that request under new business.

The next in order is the report of the Committee

on Medical Education. Dr. Joseph McDaniel, of Dover.

Report of Committee on Medical Education

It has been the desire of the Board of Examiners representing the President and fellows of the Medical Society of Delaware to keep the officers and members of this Society fully acquainted with the activity and doings of the Board.

The members of this Board are as follows: Doctors Talesian H. Davis, John H. Mullin and Olin S. Allen of Wilmington, Dr. Wm. Marshall of Milford, and Dr. Joseph S. McDaniel (President and Secretary) of Dover.

This Board works in conjunction with the Examiners representing the President and fellows of the Homeopathic Medical Society of Delaware, state and peninsula, whose members are Dr. Julian Adair, President; Dr. Edgar Bullock, Secretary; Dr. James G. Spackman, Dr. Wallace M. Johnson and Dr. A. King Lotz, all of Wilmington.

The respective Presidents of these two Boards of Medical Examiners are automatically members of the Medical Council of Delaware, whose President is the Chief Justice of the state, Daniel J. Layton.

We know personally that the members of the three groups spoken of try to be honest and fair with all those applying for license to practice medicine in Delaware.

It might be said here that the names of those applicants who take examinations are never known to any member of the Board until after the papers are corrected, thus making it impossible to show any partiality.

However, it has become necessary, owing to the increased number of applicants during the past two years, for the Board to raise its requirements for obtaining a license to practice medicine in Delaware.

At a meeting of the Medical Council, June 5, 1934, upon request of the two Boards, passed the following resolutions:

- (1) All applicants who come before the Board for examination must attain an average of 75% in every branch.
- (2) Also, all applicants for reciprocity by endorsement from other states must have been in active general practice (not in a hospital) for at least two years, continuously, in the state in which they were originally examined and licensed by examination, in order to qualify for endorsement in this state.

These two resolutions have done much to cut down the number of newly licensed physicians in the state.

The questions in each subject for examination have been made more difficult. The grading of papers is more rigid.

Another resolution recently passed by the Medical Council, as recommended by both Boards, will also help to reduce the number of applicants, that is, there will be no examination held in December this year. Therefore, there will be no examination held by either Board until the second Tuesday in July, 1936.

It might be mentioned here that the Board of Examiners, although only scheduled to meet twice each year, have met frequently in order to discuss and act upon many of the different problems that arise during the whole year and especially the few weeks preceeding the examination time. Each member has taken special interest in the affairs of the Board and is fully acquainted with its problems.

The following report shows the number of licensed practitioners in the state of Delaware, as well as those accepted during the fiscal year, July 1, 1934 to July 1, 1935, by the Medical Council and given certificates

for license to practice medicine, surgery or osteopathy: Licensed Physicians in New Castle County—

|                        |       |
|------------------------|-------|
| Wilmington .....       | 145   |
| Rural New Castle ..... | 30    |
|                        | <hr/> |
| Kent County .....      | 175   |
| Sussex County .....    | 32    |
|                        | <hr/> |
|                        | 36    |

Licensed Physicians in State of Delaware .....

|                                           |         |         |
|-------------------------------------------|---------|---------|
|                                           | <hr/>   | 233     |
| Population of the State of Delaware ..... |         | 238,000 |
| City of Wilmington .....                  | 106,597 |         |
| Rural New Castle Co. ....                 | 54,435  |         |
| Kent County .....                         | 31,841  |         |
| Sussex County .....                       | 45,507  |         |

Applicants taking examinations Dec. 1934—

|                      |       |
|----------------------|-------|
| Regulars . . . . .   | 8     |
| Homeopaths . . . . . | 0     |
| Osteopaths . . . . . | 1     |
|                      | <hr/> |
|                      | 9     |

|                                  |   |
|----------------------------------|---|
| Those who passed, Regulars ..... | 4 |
| Those who failed, Regulars ..... | 4 |
| Osteopaths .....                 | 1 |

|                               |   |
|-------------------------------|---|
| Accepted by Endorsement ..... | 2 |
| Number given license .....    | 6 |

Applicants taking examination June, 1935—

|                      |       |
|----------------------|-------|
| Regulars . . . . .   | 10    |
| Homeopaths . . . . . | 8     |
| Osteopaths . . . . . | 4     |
|                      | <hr/> |
|                      | 22    |

Those who passed—

|                      |       |
|----------------------|-------|
| Regulars . . . . .   | 7     |
| Homeopaths . . . . . | 6     |
| Osteopaths . . . . . | 1     |
|                      | <hr/> |
|                      | 14    |

Those who failed—

|                      |       |
|----------------------|-------|
| Regulars . . . . .   | 3     |
| Homeopaths . . . . . | 2     |
| Osteopaths . . . . . | 2     |
|                      | <hr/> |
|                      | 8     |

|                               |   |
|-------------------------------|---|
| Accepted by Endorsement ..... | 3 |
| National Board .....          | 2 |
| Maryland .....                | 1 |

|                            |    |
|----------------------------|----|
| Number given license ..... | 17 |
|----------------------------|----|

Fees received by the Board of Examiners during fiscal year July 1, 1934 to June 30, 1935.

|                             |              |          |
|-----------------------------|--------------|----------|
| Applicants for examinations | 31 @ \$10.00 | \$310.00 |
| Applicants for endorsement  | 5 @ 50.00    | 250.00   |
|                             |              | <hr/>    |
|                             |              | \$560.00 |

Delaware State Budget—

|                          |          |          |
|--------------------------|----------|----------|
| Medical Council—         |          |          |
| Salaries and Wages ..... | \$460.00 |          |
| Office Expense .....     | 115.00   |          |
| Travel .....             | 25.00    |          |
|                          |          | <hr/>    |
|                          |          | \$600.00 |

It will be noticed that the fees received by the Delaware State Board of Medical Examiners amount-

ing to \$560.00 and turned back to the State Treasurer, amount to nearly the amount of \$600.00 allowed in the state budget for the Medical Council. The expenses needed for the Board and Medical Council are very inadequate and it is recommended by this Committee that the Medical Society of Delaware make a special effort to procure more funds from the state during the next session of the legislature.

STATEMENT OF  
MEDICAL COUNCIL OF DELAWARE

Fiscal Year Ending June 30 1935

Appropriation for year ending June 30, 1935 \$600.00  
Expenditures

Salaries and Wages—

|          |                       |         |
|----------|-----------------------|---------|
| 10/17/34 | Harold L. Springer    | \$22.50 |
| 1/11/35  | Mollie H. Harbordt    | 40.00   |
| "        | Margaret B. Hogue     | 15.00   |
| 4/9/35   | M. H. Harbordt        | 32.40   |
| 6/24/35  | M. H. Harbordt        | 33.00   |
| 6/30/35  | Dr. T. S. Davies      | 20.00   |
| "        | Dr. O. A. Allen       | 20.00   |
| "        | Dr. John Mullin       | 20.00   |
| "        | Dr. Wm. Marshall, Jr. | 20.00   |
| "        | Dr. Julian Adair      | 20.00   |
| "        | Dr. Edgar Bu'lock     | 20.00   |
| "        | Dr. Jas. G. Spack-    |         |
|          | man                   | 20.00   |
| "        | Dr. W. M. Johnson     | 20.00   |
| "        | Dr. A. K. Lotz        | 20.00   |
| "        | Dr. Arthur Patterson  | 20.00   |
| "        | Dr. Jos. S. McDaniel  | 50.00   |
| "        | Margaret H. Camac     | 4.00    |

Total Salaries and Wages .....\$396.90

Office Expense—

|          |                              |         |
|----------|------------------------------|---------|
| 9/13/34  | American Medical Association | \$12.00 |
| 10/17/34 | Harold L. Springer           | 8.00    |
| 1/11/35  | Dr. Jos. S. McDaniel         | 13.00   |
| "        | G. C. Greene                 | 4.00    |
| "        | H. A. George Co.             | 10.10   |
| "        | Capital Printing Co.         | 3.00    |
| 6/30/35  | Margaret H. Camac            | 1.96    |
| "        | H. A. George Co.             | 5.75    |
| "        | Dr. Jos. S. McDaniel         | 18.00   |
| "        | Wm. N. Cann, Inc.            | 92.50   |

Total Office Expense ..... 168.31

Travel—

|         |                |         |
|---------|----------------|---------|
| 6/24/35 | M. H. Harbordt | \$ 5.00 |
|---------|----------------|---------|

Total Travel ..... 5.00

Total Expenditures ..... 570.21

Balance Reverted to General Fund of State.. \$ 29.79

Respectfully submitted,  
Jos. S. McDANIEL.

PRESIDENT NILES: We will now have the report of the Committee on Hospitals.

SECRETARY SPEER: Dr. O. V. James, of Milford, the chairman of that committee, sent the report to me to read.

...Secretary Speer read the report of the Standing Committee on Hospitals as follows:

Report of the Committee on Hospitals

Your committee spent two days in visiting the hospitals in the state and was received with a cordial welcome and hearty cooperation in the preparation of this report.

DELAWARE HOSPITAL, Wilmington, Del.

An inspection of this hospital disclosed that it was in very good physical condition. Since the last inspection considerable money has been spent on repairs to buildings and rearrangement of departments to facilitate better working conditions. This rearrangement included another major operating room, the addition of electrical refrigeration in the diet kitchen, new linoleum in several private rooms, new nurses' call system in men's and women's wards, new electrical refrigerating equipment in children's ward. Complete renovation of internes' quarters. Several pieces of new equipment have recently been added, namely: two new oxygen tents, one diathermy machine, one Emerson suction apparatus, and several pieces of smaller equipment.

The location of the morgue has not been changed, due to the fact that any change would be of necessity a permanent improvement and it was felt that the expense was not justified on account of the possibility of a new hospital in the near future.

The medical records are very well kept. One additional medical stenographer has been added, which will be a big help in keeping the records up to date. In the past year a metabolic and a goiter clinic have been added. The hospital maintains a Grade A nurses' training school, with a student body of eighty.

HOMEOPATHIC HOSPITAL, Wilmington, Del.

This hospital is a modern fireproof structure with adequate provision for fire escapes. It is well equipped and in fine condition. Past recommendations have been carried out in so far as it is possible. The most important additional feature of the services during the past year was the installation of the new Carpenter Clinic for the treatment of cancer and allied diseases. This clinic was made possible by the generosity of Mr. R. R. M. Carpenter, who supplied the funds as a memorial to his parents, Walter S. and Belle M. Carpenter. It is equipped with a 200,000-volt Picker-Waite machine and necessary accessories. The unit is self-contained and is housed in specially prepared lead-lined quarters, with consultation, examination, dressing rooms and reception quarters. Close affiliation is enjoyed with the Memorial Hospital of New York City and the Jeanes Hospital of Philadelphia. Radium and radon are both available and used when deemed necessary.

During the coming year the hospital is planning to increase its storage facilities for case records and to provide more adequate quarters for physiotherapy, if funds can be made available for same. During the present year there has been a daily increase in patient population of almost 10%, which if continued may require constructional alterations to the dietary and kitchen departments. The consummation of this will also be subject to the availability of the necessary funds.

WILMINGTON GENERAL HOSPITAL, Wilmington, Del.

Necessity has compelled increased bed capacity above last year. This hospital is modern and well equipped. Past recommendations have been complied with so far as conditions will permit and those in authority are very cognizant of their needs. There has been a gradual increase in the number of patients admitted and patients treated in the out-patient department. The number of maternity patients is above that of previous year. At the present time the necessity of a new wing is under discussion. This would not only segregate the maternity patients but increase the capacity for other patients. Doris Memorial Hospital is the only hospital for contagious diseases in the state. This is a new, modern, well-equipped institution for the purpose which it fills. In 1934, 298 patients were admitted and 265 discharged cured. One-third of the deaths occurred within 24 hours after admission. This speaks well for the character of its work.



**ST. FRANCIS HOSPITAL, Wilmington, Del.**

During the past year new equipment has been added, namely: oxygen tent, equipment for post-mortems, new delivery table in delivery room, a central dressing room, and many smaller items. In fact, several departments have been completely renovated. The nurses' home has new laboratories for teaching of chemistry and dietetics, as well as equipment for lectures and demonstrations in bacteriology and pathology. A new wing is needed to relieve crowded conditions and to better segregate certain patients.

**BRANDYWINE SANATORIUM, Marshallton, Del.**

There is an even greater degree of overcrowding than was recorded in the previous report, both in the children's building and the adult departments. We are informed that plans are being formulated for a modern 50-bed building for children's department. There is a waiting list of adults equal to the present capacity. Maintenance and repair increase year by year as the buildings grow older and population increases. Improvements have been added to the water supply and fire protection source by 150%. Modern washer and extractor have been added to the laundry. Other additions have been fluoroscope for children's hospital, and rearrangements of the treatment room, tables, instrument cabinet, medicine cabinet and sterilizer for children's hospital. Other absolutely necessary improvements have been made in so far as finances will permit. Increased capacity is needed to not only relieve the overcrowded condition, but to lessen the waiting list.

**DELAWARE COLONY FOR THE FEEBLE-MINDED  
Stockley, Delaware**

Delaware Colony has been able to admit only a small percentage of those applying for admission during the past year, due to the fact that the buildings were filled and new admissions could be considered only when there were vacancies due to releases and parole. There has been a larger number released and paroled from the institution during the past year than in any previous similar period. A physician has handled all medical cases at the Colony Infirmary. Three trained nurses are full time employees; a fourth was added for night duty beginning August 1st. A dentist has treated the patients in a well-equipped office in the infirmary. Those patients requiring operation have been sent to another hospital and those with eye defects have been treated by an eye specialist. An enclosed open-air recreation space is much needed in order that the permanent infirmary patients such as the wheel-chair and semi-helpless patients may have the benefit of the sunshine and fresh air. At least six additional wheel chairs are needed. A portable x-ray machine should be acquired. The wards in the infirmary are overcrowded and there is no way to admit any more permanent patients until the infirmary is enlarged.

**DELAWARE STATE HOSPITAL, Farnhurst, Del.**

The normal capacity of this hospital, including the new buildings and the remodeled northeast section of the newly-acquired New Castle County Building, is 783 beds, while the actual number of patients present in the hospital on the 26th day of September was 1,050. In addition to this, the hospital supervises over 200 paroled patients extramurally. In this figure we have not included the preventive and diagnostic and treatment work accomplished by the mental hygiene clinic, which ranges between 900 and 1500 cases every year. It is obvious that there is space lacking for over 250 patients. It is also clear to every physician's mind that the population of a hospital for the mentally ill is bound to grow during economic depression and environmental distress. It is the bound duty of every practicing physician in the state of Delaware to know the difficulties under which the Board and the staff are laboring in the care of the mentally ill in this

state. It is also the duty of every practicing physician to explain the importance of the existence of a well-maintained hospital for their mentally ill as well as maladjusted personalities. Delaware can be proud of the fact that the word "insane asylum" has been eradicated from the minds of the majority of the people of the state of Delaware. Yet there is a great deal to be done, and what the hospital authorities are hoping to do will never be accomplished fully unless the physicians, individually as well as collectively, will support fully the principles of the hospital, "One suffering from a mental and nervous disease is entitled to the same treatment and care as one who suffers from a physical illness." The most economical way to relieve the overcrowded condition is to complete the remodeling of the former New Castle County Building, also to complete the nurses' home to provide adequate quarters for the twenty-five graduate and twelve student nurses. There is also a necessity for a psychiatric observation clinic for children, for the purpose of studying and treating those who are under 16 years of age, and who are suffering from either psychosis or some behavior problem. At present time there are many children who are scattered among the adults on different wards in the hospital, which condition is detrimental to the adults as well as to the children.

**DELAWARE STATE WELFARE HOME, Smyrna, Del.**

The two buildings, medical center and pavilion, were clean but greatly overcrowded, there being 345 patients in an institution designed to hold 235. Nine beds were found in five bedrooms and all single rooms contained two and sometimes three beds. The patients on the whole seemed to be happy and well cared for. A staff of seven graduate nurses, plus some thirty-odd attendants, male and female, were found to be efficient in performing their duties in caring for the general welfare of the patients. Three meals a day were being served as well as extra nourishments and special diets where necessary, all being under the direction of a graduate dietitian. Medical and surgical care was available at all times, the superintendent being responsible for the medical care and a surgeon being called in for surgery. A very adequate set of records was being kept. These records covered the patient's activities from the time of reference, through admission until either death or discharge. It was found that some 85 major and minor operations of all descriptions were performed in the very adequate operating room during the calendar year 1934, and that 17 pregnant females were delivered in the delivery room of the institution. It was found that at all times there were approximately 50 syphilitics out of a population of 345. These patients were receiving specific treatment and their Wassermanns checked at regular intervals. Some half dozen diabetics were also on diets, as well as receiving insulin. Preventive medicine in the way of vaccines and inoculations was being used wherever possible. A visiting dentist was coming to the institution twice a week and adequately caring for the dental health of the patients. Where necessary, impressions for artificial teeth were taken and furnished by the institution.

Religious services were found to be held every Sunday, except in the months of June, July and August. Amusements in the way of moving pictures and various concerts were also provided at regular intervals. The following criticisms were made by the committee during their tour of inspection:

Great overcrowding in both white and colored sections; no x-ray equipment; no clinic or surgery devoted to the care of the eye; no occupational therapist; no laboratory technician.

The following recommendations were made by the Committee after due study of the general situation and problems existing: a pavilion for white females; a pavilion for colored patients; a portable x-ray machine; equipping of a laboratory and the employment

of a technician; establishment of an eye clinic both for diagnosis and surgery as soon as funds are available.

#### BEEBE HOSPITAL, Lewes, Del.

During the past year new equipment has been added as follows: a new Pavaex machine for the treatment of Buerger's disease and allied conditions; Elliott machine for the treatment of pelvic conditions by dry heat; G. E. Quartz lamp; Compres tube unit for operation of a radio knife, electrocoagulation, etc.; remodeled portable Scalytic operating room lamp; refinished cribs in children's ward; equipped several more beds with spring air mattresses, and installed an automatic oil-burning hot water heater capable of supplying the entire hospital with hot water for all purposes.

On July 1st, of this year the Beebe Hospital of Lewes, Inc., a stock corporation, was changed to the Beebe Hospital of Sussex County, Inc., the charter of which eliminated the stock feature and provided for a permanent trusteeship.

The recommendations of the Committee last year have not been fully complied with because of financial conditions. At the present a drive is being made to raise funds with which to take care of all recommendations and several other improvements.

#### KENT GENERAL HOSPITAL, Dover, Del.

Conditions and suggestive improvements are much the same as previous reports; however, there are several needed alterations which are hoped to be made in the near future. These are:

Relocating the present delivery room so there will be a sound-proof wall, running water and tiled floor; installation of running water, with a baby bath in the nursery; partitioning of the present delivery room to make two private maternity rooms.

A home recently purchased for a nurses' home is being renovated and occupancy is expected in the near future. There is hope at a later date to make addition to this property so that all the nurses may be accommodated, as some are now living in the basement of the hospital.

Additional private room was suggested, since there are but four in the institution at present. The operating room, although roomy, light and clean is poorly located, being on the first floor and directly over the boiler room.

#### MILFORD EMERGENCY HOSPITAL, Milford, Del.

Milford Emergency Hospital has very little to report different from the last year, except that necessity has forced increased bed capacity to 42 beds, and the condition of the building is such that an active campaign has been launched for a new building on a new site. We are informed that active operations on the new plant will begin early in 1935.

Respectfully submitted,

OLIVER O. JAMES.

**PRESIDENT NILES:** We will now have the report of the Committee on Necrology. On that committee we have Dr. W. T. Jones, Dr. W. C. Deakyne, and Dr. J. P. Wales. Dr. Wales will give the report.

#### Report of the Necrology Committee

**DR. J. P. WALES (Wilmington):** I haven't received the committee's report, so I can't read it unless Dr. Jones has sent it in.

**SECRETARY SPEER:** I haven't received any reports. Those who have died during the last year are Dr. John W. Derriksen, of Frederica, October 4, 1934; Dr. William P. O'Ready, of Claymont, October 9, 1934; Dr. Thomas N. Millikin, of Wilmington, November 24, 1934; and Dr. Joseph M. Martin, of Lewes, March 30, 1935.

**DR. WALES:** I think it has been customary to stand for a moment.

**PRESIDENT NILES:** It has been regularly moved that we stand for a moment in reverence to those who have passed away.

...The members arose and stood in silence for one minute...

**PRESIDENT NILES:** We will now have the reports of the Special Committees. The first is the Woman's Auxiliary. Has anyone a report from the Woman's Auxiliary?

If not, we will pass on to the Cancer Committee. Dr. McElfatrick, of Wilmington, will give that report.

...Dr. McElfatrick read the report of the Cancer Committee, as follows:

#### Report of the Committee on Cancer

The Cancer Committee reviews the cancer situation for the past year as follows:

There are six cancer clinics operating in different hospitals of the state:

Lewes, Dover, Milford, one each, and three in Wilmington.

The clinics that are held down-state are held monthly, and the ones in Wilmington, every week or two weeks. They are operated by the hospitals themselves as independent units, and the hospitals have appointed the doctors in charge of these clinics.

These clinics are fairly well attended, showing that more interest and cooperation has been shown since last year, but they are handicapped because of lack of funds.

There is little that this Committee can do except to report the work and the number of patients these clinics give service to. Some of the clinics need help in the line of newspaper publicity, and the distribution of cancer pamphlets to the doctors and patients in the vicinities of these clinics.

It is the thought of the Committee that each county medical society should have on their program one meeting in the year devoted to the subject of cancer and its treatment; and also that there should be at least one or two meetings a year with all three county medical societies meeting in a central place, perhaps Dover, for a one-day program on cancer which would be open to all the physicians of the state.

We feel that the Medical Society should take more interest in and provide some ways and means to educate the public in the cancer problem. At the present time, the Society only appoints a Committee which has to get information from the different hospitals in regard to their work. Their hands are tied because of lack of authority and funds to go further into the cancer situation in Delaware.

We feel that the Medical Society of Delaware should be the one to take these steps rather than lay organizations or clubs.

Respectfully submitted,

G. C. McELFATRICK

**PRESIDENT NILES:** We will now have the report of the Committee on Syphilis by Dr. Vallett, of Wilmington.

...Dr. Vallett read the report of the Committee on Syphilis, as follows:

#### Report of the Committee on Syphilis

It is the opinion of this Committee that the responsibility for the ultimate control of syphilis rests squarely on the shoulders of the general practitioner.

The fact that many physicians unload these cases on the clinic does not absolve them from this responsibility.

The venereal clinic could be used as a place for consultation and demonstration in the diagnosis and treatment of these cases.

The application of the above plan would reach many cases in rural communities who now go untreated.

The State Board of Health supplies arsenicals and bismuth for the treatment of any indigent who may



need it, and will also cooperate in helping the physician contact such patients.

When all of us learn to respect the early penile sore, refraining from and cautioning the patient against the application of any powder, ointment, caustic or solution other than normal salt solution, until a microscopic examination (including dark field, smear and often tissue section) has been made, then only will we see a great reduction in the number of cases of syphilis reaching the secondary and later stages. Early cures would cease to be a rarity.

Respectfully submitted,

BRICE S. VALLETT.

**PRESIDENT NILES:** We will now have the report of the Committee on Tuberculosis, by Dr. Samuel, of Wilmington.

...Dr. Samuel read the report of the Committee on Tuberculosis, as follows:

#### Report of the Committee on Tuberculosis

Tuberculosis deaths for all forms in the state of Delaware in 1934 is as follows:

|                      |    |
|----------------------|----|
| White Male .....     | 52 |
| White Female .....   | 43 |
| Colored Male .....   | 30 |
| Colored Female ..... | 27 |

Total .....

In addition to the above, there were 5 deaths of non-residents.

#### COMPARISON OF DEATH RATES:

| Year | Delaware<br>Deaths | Delaware<br>Rate | U. S.<br>Rate |
|------|--------------------|------------------|---------------|
| 1921 | 308                | 137              | 98            |
| 1924 | 266                | 116              | 89            |
| 1929 | 193                | 82               | 76            |
| 1934 | 152                | 62               |               |

**NOTE:** The National Tuberculosis Association states that there was a decline during 1934 of the U. S. Rate, although the rate has not as yet been given.

#### SERVICES OF THE STATE HEALTH DEPARTMENT IN PREVENTION AND CONTROL

Free chest clinics are held regularly at specified clinics throughout the state. At these clinics are examined: 1. Persons referred by physicians either for diagnosis of for admission to the sanatorium; 2. Contacts; 3. discharged patients from sanatorium who wish re-examination; 4. Persons taking home treatment. Approximately 2,000 patients attend these clinics annually.

#### BRANDYWINE SANATORIUM

July, 1934 to July, 1935

|                                                 |     |
|-------------------------------------------------|-----|
| Number of patients cared for during the year .. | 179 |
| Number of admissions .....                      | 78  |
| Waiting list July 1st .....                     | 79  |
| Waiting list at present time .....              | 85  |

The waiting list is about evenly divided between males and females with at present no children. During the past year the state appropriated \$150,000 for a new addition to Brandywine Sanatorium. It was hoped that the Federal government would supplement this appropriation by an additional \$65,000. At present, it is doubtful that this additional appropriation will be received, so the officials at Brandywine are going ahead with plans, and it is expected that specifications will be received and ready for bidders in a few days.

#### EDGEWOOD SANATORIUM—FISCAL YEAR 1934

|                                    |               |
|------------------------------------|---------------|
| Number of patients cared for ..... | 68            |
| Number admitted as follows: .....  | classified 39 |

5 Minimal  
13 Moderately advanced  
17 Far advanced

4

During the year there were 33 discharges classified as follows:

2 Arrested  
5 Apparently arrested  
6 Improved  
4 Unimproved  
17 Died

At present there are 17 on the waiting list, divided as follows:

7 Males  
7 Females  
3 Children

#### TUBERCULIN TESTING IN COOPERATION WITH DEL. ANTI-TB. SOCIETY:

During the fiscal year, tuberculin testing was done in the following schools: Dover, New Castle, Laurel, Seaford and Selbyville.

Tuberculin testing was also done at the Health Centers in Wilmington, Dover and New Castle.

#### Results:

|                                                            |      |
|------------------------------------------------------------|------|
| Children tested .....                                      | 2022 |
| Children reacting .....                                    | 386  |
| Children giving history of contact with T. B. ....         | 300  |
| Children of contact group needing definite treatment ..... | 11   |
| Children giving no history of contact ..                   | 1692 |
| Children of this group needing treatment                   | 3    |

#### TUBERCULOSIS NURSING BY VISITING NURSE ASSOCIATION WITH ANTI-TUBERCULOSIS SOCIETY COOPERATING

During the fiscal year, 11 more cases were cared for and 157 more visits made than during previous years.

|                                            |    |
|--------------------------------------------|----|
| Number of cases cared for .....            | 63 |
| Number of cases discharged .....           | 55 |
| Cases carried into present fiscal year ... | 8  |

Of discharged patients, 17 died; 10 went to sanatorium; 14 under state supervision; 11 to private physicians and 3 to other hospitals.

|                                                    |     |
|----------------------------------------------------|-----|
| Number of visits made on discharged patients ..... | 969 |
| Number tuberculosis welfare visits .....           | 153 |

#### SUNNYBROOK COTTAGE FOR PREVENTION OF TUBERCULOSIS IN CHILDREN IN DELAWARE MAINTAINED BY THE DELAWARE ANTI-TUBERCULOSIS SOCIETY FISCAL YEAR 1934

|                                                 |      |
|-------------------------------------------------|------|
| Patients cared for during year .....            | 35   |
| Patient days .....                              | 6722 |
| Hospital days for special treatment ...         | 62   |
| Days for special medical and nursing care ..... | 168  |
| School days .....                               | 4169 |

At present practically all of the 22 children now at the Sunnybrook Cottage are contact cases.

#### HEALTH EDUCATION

In addition to cooperating with the Visiting Nurse Association, the tuberculin testing program, and the maintenance of Sunnybrook Cottage, the Delaware Anti-Tuberculosis Society carries on a year-round health education program for the dissemination of information on the prevention and control of tuberculosis, through lectures, informal talks, distribution of informative literature, and participating in the annual diagnosis campaign and negro health week, the Society reaches nearly all residents of Delaware. In addition to this, the Society cooperates with the State Department of Public Instruction by distributing health charts and growth graphs that were last year used by 412 schoolrooms, with more than 13,000 children enrolled. The Society also maintains a health educational booth at the Kent-Sussex Fair each year.

Respectfully submitted,

M. I. SAMUEL.



**PRESIDENT NILES:** We will now have the report of the Committee on Medical Economics, by Dr. Bird.  
 ...Dr. Bird read the report of the Committee on Medical Economics, as follows:

#### Report of the Committee on Medical Economics

The year just passed has witnessed no important change in the economic situation of the profession in Delaware. Plans are now in the making, especially in Wilmington, that may lead to a satisfactory answer to the question of medical care for the indigent and near-indigent classes. The first movement in this direction has been the setting up, by the four hospitals, of a corporation to administer the so-called "group hospitalization" plan that is successfully working in over forty cities. This is a pre-payment plan, for the employed class. After this plan is established upon a satisfactory basis, we have hopes that it may lead to the development of the following:

1. A post-payment plan, for those not regularly employed.
2. A central collection service for physicians, dentists, and hospitals.
3. A central admitting bureau for the hospitals, through which will be routed all in-patients and all out-patients who claim to be indigent or near-indigent.
4. The establishment of all clinics on a salary basis for the physicians who attend said clinics and dispensaries.
5. The evolution of a private-office practice for those who cannot afford to pay the regular rates, but who are not eligible for charity.

This is an ambitious prospect, but one the attainment of which is well within the realm of the possible. It will require much time, much conservative thought, and much readjustment, but it can be done if we but mark our course with clear thinking and prudent action.

Respectfully submitted,

W. EDWIN BIRD.

**PRESIDENT NILES:** We will now have the report of the Committee on Criminologic Institutes, by Dr. Tomlinson.

**DR. R. W. TOMLINSON (Wilmington):** Out of deference and acquiescence to our distinguished psychiatrist and efficient chairman of the Committee on Criminologic Institutes, Dr. Tarumianz, I have consented to read the report.

...Dr. Tomlinson read the report of the Committee on Criminologic Institutes...

#### Report of the Committee on Criminology

For the last three years the Committee on Criminology has presented a complete report on crime in general, with concrete recommendations in regard to the criminals in this state. These recommendations were as follows:

The Committee feels that the medical profession of Delaware should be more interested in the prevention of crime rather than in the treatment. Therefore, it recommends to have a closer cooperation between the public educational system, judicial system, bar association, organized social workers, and the medical profession. To find better methods for rehabilitation of delinquent children. To establish better environment for the vast majority of children who are in unhealthy and inhuman environment. To have adequate forces in organization for prevention of crime, for studying each individual delinquent child.

As to care and treatment of criminals in this state, the Committee finds that in the last few years the state courts have endeavored more and more to give each criminal a fair trial. Many doubtful cases have been referred to the mental hygiene clinic and state psychiatrist, to have complete examination and prolonged observation before presenting the cases. The office of the Attorney-General has been very coopera-

tive in this procedure. The Committee hopes that the courts of the state of Delaware will take the same stand as the courts of many states, especially the state of New York. That no case of felony should be tried in the courts unless there is a complete social, psychological and psychiatric report.

The Committee recommends to request the legislature to appropriate sufficient funds to survey this state in regard to delinquency and present definite plans for the prevention of delinquency.

The Committee recommends to request the Bar Association of Delaware to appoint a committee of three, representing each county of the state, who jointly with the committee from this society will continue the efforts in studying the question of crime.

The above-mentioned reports were received and filed by the Society. Last year for the first time, the Society has endeavored to have some contact, officially, with the Bar Association, apparently without any result. The Committee wishes to beg the Society to make all efforts to carry out such recommendations as have already been made.

The section on Forensic Psychiatry and Conduct Disorders of the American Psychiatric Association, of which the chairman of your committee is a member, is endeavoring to have closer cooperation between the members of the Medical Association and the Bar Association, for creating new laws for the prevention of crime.

The Committee is urgently requesting the Society to authorize the President to make use of the recommendations made by the Committee, in the very near future, as the question of crime is one of the most important factors in the life of the community.

Respectfully submitted,

M. A. TARUMIANZ.

**PRESIDENT NILES:** There are several requests made in there which will be taken up under new business.

We will now have the report of the Delegate to the American Medical Association, Dr. Wagner, of Wilmington.

...Dr. Wagner read his report, as follows:

#### Report of Delegate to A. M. A.

I first wish to apologize for not attending the special session of the House of Delegates of the American Medical Association, convened at the request of the Board of Trustees, which was held in Chicago, February 15-16, 1935. The meeting happened to be held at a time when it was very inconvenient for me to leave Wilmington.

A few abstracts from the report of the Reference Committee, which was unanimously adopted by the House of Delegates, will give us an idea of what was there accomplished:

"The House of Delegates of the American Medical Association reaffirms its opposition to all forms of compulsion sickness insurance whether administered by the Federal government, the governments of the individual states or by any individual industry, community or similar body. It reaffirms, also, its encouragement to local medical organizations to establish plans for the provision of adequate medical service for all of the people adjusted to present economic conditions, by voluntary budgeting to meet the costs of illness.

"The House of Delegates recognizes the necessity under conditions of emergency for Federal aid in meeting basic needs of the indigent; it deprecates, however, any provision whereby Federal subsidies for medical services are administered and controlled by a lay bureau.

"The so-called Epstein bill, proposed by the American Association for Social Security, is a vicious, deceptive, dangerous and demoralizing measure.

"Your reference committee suggests that the Board of Trustees request the Bureau of Medical Economics

to study further the plans now existing and such as may develop, with special reference to the way in which they meet the needs of their communities."

The Atlantic City session of the House of Delegates was held June 10-14, 1935. Addresses were heard and resolutions presented on the opening day.

The Judicial Council believes that the time has arrived when we should insist on the strict enforcement of the Principles of Medical Ethics by all constituent societies. The delinquents comprise individuals, certain groups, and a few institutions. Solicitation of patients, particularly in industrial practice, unfair competition by clinics and groups, and unethical and unlawful practice of medicine by hospitals, dispensaries, insurance companies and universities furnish outstanding examples.

A resolution introduced by Dr. Isaac A. Abt, Section on Pediatrics, asked the decision of the Judicial Council on a Standing Rule adopted by the House of Delegates in 1902, in respect to solicitation of votes, in which it is declared "that it is the sense of the House of Delegates of the American Medical Association that the solicitation of votes for office is not in keeping with the dignity of the medical profession nor in harmony with the spirit of this Association, and that such solicitation shall be considered a disqualification for election to any office in the gift of the Association." The decision of the Judicial Council was that in practice the rule is unenforceable. It was declared to be illegal and of no force and effect.

Addresses by officers of the Canadian Medical Association on June 11th were responded to by officers of the American Medical Association.

The Report of the Reference Committee on Medical Economics stated: "Your Committee deems it inadvisable for the American Medical Association to attempt to dictate any form or set-up for medical service, but assures the members that the parent organization is always willing to advise and cooperate with any unit desiring assistance."

In regard to birth control a resolution was passed asking the Board of Trustees to appoint a committee to study the problem. This Committee is to submit a report at the 1936 Convention.

Dr. Walter L. Bierring has been succeeded as President by Dr. James S. McLester. Dr. James Tate Mason, of Seattle, is President-elect.

By a vote of 80 to 71 Dr. Nathau B. Van Etten, of New York, was elected Speaker of the House of Delegates over Dr. F. C. Warnshuis, of California, the former Speaker.

The 1936 Convention will be held in Kansas City.

In conclusion I wish to thank you for the honor and privilege of serving as your Delegate, and to assure you that it was a pleasure to attend what everyone considered the best convention ever held.

Respectfully submitted,

C. E. WAGNER.

PRESIDENT NILES: At this point we would like to hear the report of the Auditing Committee.

#### Report of the Auditing Committee

DR. BOOKER: We have examined the books of the Treasurer and found them correct.

PRESIDENT NILES: At this time I would like to say that it is very gratifying to see the demonstration of intellect and conscientious work in the preparation of these reports. It is highly complimentary to a Society of this standing.

The next thing in order will be unfinished business.

SECRETARY SPEER: I have no unfinished business.

#### Salary of the Editor

PRESIDENT NILES: The next order of business is new business, and under new business I have a few items. One is the request of Dr. Tarumianz that the power to increase the Editor's salary up to \$500 be voted upon, or—how did you word that?

DR. TARUMIANZ: That it be granted the Publication Committee.

PRESIDENT NILES: You have heard the suggestion. Will somebody formulate a motion to that effect?

DR. McELPATRICK: I so move.

...The motion was seconded by Dr. Chipman...

PRESIDENT NILES: It has been regularly moved and seconded that—will you repeat it?

DR. TARUMIANZ: That the Publication Committee be authorized to extend the salary of the Editor to \$500 when the budget will permit the same.

...The motion was put to a vote and carried...

#### Assistant Secretary

PRESIDENT NILES: The next request was in regard to an assistant to the Secretary. Will you word that as you wish it?

SECRETARY SPEER: This is just a suggestion. As you all know, the work of this office is something that keeps you on your toes all year, and I just thought this year that the term of office ought to be limited to five years, and that there should be an assistant Secretary whose duty it would be to assist in the regular duties of the Secretary, and who would naturally succeed the Secretary at the expiration of his term of five years.

That is just something for discussion.

DR. CHIPMAN: Then he would be assistant Secretary for five years and Secretary for five years.

DR. PRICKETT: I don't think it is obligatory for him to succeed.

SECRETARY SPEER: The idea is, if he is working in there he would be the natural man to succeed. He would be the man that would know more about it. There would be no use having an assistant for five years and then elect someone else at the expiration of the five-year term who had had no experience in the thing at all.

It is just something that I thought I would like to bring up for discussion, that is all.

DR. WAGNER: If you make it a voluntary assistant that wouldn't create a new office. But if you create the office of assistant Secretary you have to change the By-Laws.

DR. EARL BELL (Wilmington): The By-Laws say that the Secretary shall be elected each year. How are you going to elect him for five years unless you elect him over again each year?

SECRETARY SPEER: Change your By-Laws.

PRESIDENT NILES: Is there any other discussion on this point?

DR. IRA BURNS (Wilmington): Couldn't the assistant be appointed annually and succeed the regular Secretary at the end of that year? Why make it five years? The assistant would in one year be capable of taking care of the work if the regular Secretary should discontinue at the end of one year.

SECRETARY SPEER: The idea is that by having someone associated with you, you will always have someone in the position that is keeping in touch with the work, don't you see?

DR. SAMUEL: It seems to me that the basic principle is the annual election of the Secretary. If his tenure of office is one year how are you going to change it to five? It seems to me, if these officers are elected for one year, if it is to the best interests of the Society to change the By-Laws and make it five years we should do so. But the first thing we have to consider is whether we are going to change it from one year to five years.

DR. CHIPMAN: As long as our Editor is trying to get an increase in salary, why not let him work with the Secretary as a voluntary assistant?

DR. BIRD: Mr. Chairman, I didn't intend to comment on this suggestion at all, but as long as I have been dragged into it I will comment. I want to preface my remarks by saying that this suggestion of any increase in salary, which is very large to begin with,



of course, doesn't—well, never mind. It was a new thought; it was not mine. It just happens, however, THE JOURNAL is still on the up and up, fortunately, despite the hard times.

Now, so far as acting as an assistant Secretary is concerned, I have always been at the Secretary's beck and call. I think he will admit there has been co-operation at all times. Whether the office of Secretary needs an assistant or not is for the secretary to say. I have never filled the office.

I don't believe it is a wise thing to put any fixed tenure beyond the already established tenure of one year for every office in the gift of this Society. The Secretary who merits re-election is certainly going to get it. One man was Secretary for this Society for sixteen years, another for twelve, and so on. Whenever Dr. Speer gets tired of holding the office all he has to do is to refuse the nomination.

He has put this forth only as a suggestion, and I think all our remarks are out of order in that no one is talking on any particular motion. But so long as the matter is merely up for discussion informally, I am frank to say I don't think it is a good thing to do. Dr. Speer has made an excellent Secretary and I hope his name is put on the ballot for Secretary next year. He has been efficient. As to an assistant Secretary, he would have to say that the need is really there.

SECRETARY SPEER: It isn't that I have too much to do or anything of the sort, but having been here for two years now, I know how much easier it would be for a man if he were associated with you and then were going to step into the place to follow through with the work. He would have his contact just the same as the Secretary would, and he would carry on.

It was merely something that occurred to me. It isn't by any means that the work is too heavy. I just thought by coaching someone into the thing he would naturally fall in and it wouldn't be quite so difficult for him when he did take it up.

DR. CHIPMAN: You would have to change the By-Laws.

SECRETARY SPEER: Yes, that is what would have to be done. I only brought it up for discussion. You can throw it out—I don't care.

PRESIDENT NILES: Gentlemen, it involves a great deal to attempt to change our By-Laws. I would suggest that under the circumstances we drop it.

#### Budget of the State Examiners

I think the next thing that is important is the suggestion by the Committee on Medical Education, wasn't it, Dr. McDaniel, that an increase be made in the fees of the examinations by the state?

DR. TARUMIANZ: An increase of the budget.

SECRETARY SPEER: An increase in the budget by the state.

PRESIDENT NILES: That subject is open for discussion.

DR. WM. MARSHALL, JR. (Milford): A resolution to increase the amount of money appropriated to the Medical Council for use of the Committee on Education would have to be by a change in the law. That involves also quite a few other things, and whether or not it should be done is a question that has been up before this Society for several years. I think myself that we have here not only the question of an insufficient amount of funds, but there is the old question too of the irregular practice of medicine and practicing without proper qualifications. We have this year put on the statute books at Dover the collection of new taxes from chiropractors, and so forth. Now, the chance is right there for the Medical Society, if it wishes, to push their case against these fellows who are practicing medicine without a license. There is no question but that they are practicing medicine, but if the Society wants to go aboard a little campaign now is the best time to do it. These

fellows pay their taxes to practice chiropractic. Chiropractic, we all feel, is infringing on the practice of medicine, and we don't feel chiropractors are anywhere near qualified to do it. We could easily get from the list of the state tax collector the names of those residents who have paid taxes, and our Legislative Committee, through the Attorney-General, could make a good cleanup. If the Society thinks it is the proper thing to do, I think you will find that the Legislative Committee will get right back of us. Dr. Niles is the chairman of that committee. It is our one chance. If we don't do it this year, let's forget about it and let the chiropractors go ahead as they are doing. But now is our one chance to get together and get those fellows.

PRESIDENT NILES: If I understand you right, you recommend that the Legislative Committee take an active interest in this subject and formulate some plan?

DR. MARSHALL: I think not only that the Legislative Committee should take an interest, but the Legislative Committee should be ordered from the consensus of the opinion of the members of the State Medical Society. That is rather foreign to the recommendation that was made in this report today, but the thing that is really needed is more money to run the Medical Council and the office of the State Board of Medical Examiners. It is run through our secretary and our secretary, of course, is also our president, and he is automatically a member of the Medical Council. We all think that the amount of money that is appropriated is entirely inadequate to run the office right. It doesn't cover enough. It doesn't anywhere near cover the expenses of the Examining Board and the incidentals like letters, the certificates to practice medicine, and all the correspondence that is necessary. It doesn't anywhere near cover it. It does put a big financial burden on the members of the Medical Council and the secretary, who has to carry on a lot of work. They all go down in their own pockets.

DR. PRICKETT: I move the question be referred to the Committee on Public Policy and Legislation.

...The motion was seconded, was put to a vote and carried...

#### Expenses of Delegate to A. M. A.

PRESIDENT NILES: There is another question at this time which should be brought before this worthy body for discussion. I have overheard and have discussed with different influential medical men of the country the question concerning our delegate to the American Medical Association, and the culmination of these discussions has been as follows: that the delegate to the American Medical Association from Delaware is greatly handicapped by being changed every two years or so. They feel that to be of any great value in the organization of the American Medical Association it should be a law, or an unwritten law, that our delegate be sent back over a period of several years, so that he gradually has time to work in and get on the different committees and function with that great organization.

I am extending that to you in the form of food for thought. It does not necessarily have to be a law, it does not have to be instilled into our By-Laws, but it could be an unwritten law, if we see the advisability of such a thing.

DR. TOMLINSON: Right along that line I would like to say that in visiting one night with Dr. Hunsberger, of Norristown, who has been a delegate for twenty-seven years from that county and was present at this last convention in Atlantic City, he said to me, "Why is it that you men from Delaware send such sterling men to the congress, and constantly, year after year, send a different man? Although these men have been thoroughly creditable to the state, why don't you select the best man you can out of the state, irrespective of any affiliations that he might have, and return him year after year, so that he will get assign-



ments in the House and make it worth while and bring the state to some prominence?"

He asked me if I wouldn't bring it up at the next meeting and I said I would. I talked with Dr. Niles and I presume I am one of the men that he was referring to. I do think it is food for thought and probably in the interests of the Society. I think Dr. Wagner and Dr. Beebe will bear me out. As it is now we send a different man every year and he doesn't have time to get on the committees and does not gain any position of prominence.

DR. WALES: Are the expenses paid by the men themselves? I ask that question with the thought in view that it is a hardship. A man can't always go. The chief point in not sending our best man was whether that best man could go. We have been unrepresented any number of times.

PRESIDENT NILES: That is true. I think if there is any way for it to be made possible that the Medical Society of Delaware should raise the funds to send our delegates to the American Medical Association.

SECRETARY SPEER: The A. M. A. is paying traveling expenses. Is that not right?

DR. WAGNER: I think not. I made inquiries before I went to Milwaukee and I understood expenses are not paid. I paid my own expenses to Milwaukee, and also to Atlantic City, on the supposition that expenses were not paid.

Right along this line, I do feel it certainly would be wise (and I say this after having served and in anticipation of not serving again) for a man to be elected for a period of years, five or ten years, or at least we should have an unwritten understanding that he would be sent back year after year; this present way one simply gets acquainted and hardly knows what to do. Of course I have been out in Milwaukee a few years ago and I knew the ropes a little better, but I do feel those two points ought to be adhered to—that the delegate would be sent for a period of years, and his expenses paid.

PRESIDENT NILES: Could you give us roughly the expenses necessary for you to go as a delegate?

DR. WAGNER: No, I kept no record of it. It didn't mean anything to me, I was glad to go. I don't have any idea.

SECRETARY SPEER: The reason I said that I thought the A. M. A. paid expenses is that when I had the notice of the special meeting in February they said they paid all expenses.

DR. WAGNER: Is that right?

SECRETARY SPEER: Surely.

DR. TOMLINSON: They did on that special meeting but not on the regular meetings.

SECRETARY SPEER: The secretaries and editors are always paid their expenses. You get your full railroad fare and five dollars per day. I don't know why they won't pay the expenses of the delegates, unless it is too great a number.

DR. BIRD: The Conference on Medical Licensure, which is a Headquarters affair, and the Conference of Secretaries and Editors, which is also a Headquarters affair, are brought to Chicago at the invitation of the American Medical Association for their own benefit as much as ours, and they pay the expenses. They have never paid, and there is nothing in their By-Laws to warrant paying, the expenses of the state delegates to the annual convention. I do happen to know that somewhere around two-thirds of the states do pay the expenses of their delegates. Massachusetts, three or four years ago, decided for the first time to pay for the entire list. They had six or eight delegates. That was the last large state that I know of. Most of the states, two-thirds of them, perhaps, pay the expenses of their delegates.

PRESIDENT NILES: Wouldn't it be a good suggestion to put that question in the hands of some committee and let them make some future report on it? Or

is it advisable to make some motion that would govern that? What do you think, Dr. Tarumianz?

DR. TARUMIANZ: It is up to the House of Delegates.

DR. BELL: Is the delegate elected or is he appointed?

PRESIDENT NILES: The delegate is elected.

DR. MARSHALL: Several years ago we used to allow \$25 for the expenses of a delegate. I guess that was twenty-five or thirty years ago. I don't know what they allow now. I think if we wanted to get right down to what we should allow it could be easy enough to figure a trip halfway across the continent, because one year the meeting will be in the East and the next year in the West. We can take railroad halfway across the continent, and per diem for the hotel. How many meals would there be? It is usually a five-day meeting, isn't it? It would be easy enough to work out how much should be allowed. I think \$50 would cover the expenses very easily if railroad fare were added to that. It would be less than \$100.

DR. SAMUEL: To get the matter before the Society I move that the expenses of the delegate to the American Medical Association be paid by this Society.

DR. TOMLINSON: I second the motion.

SECRETARY SPEER: I would like to amend that and say carfare and \$5 a day. We could run into thousands on expenses. You have to stipulate.

DR. SAMUEL: I accept the amendment.

PRESIDENT NILES: It is regularly moved and seconded that the expenses of the delegate to the A. M. A. be carfare and \$5 a day. Is there any discussion? . . . The motion was put to a vote and carried. . .

PRESIDENT NILES: In looking over our By-Laws, gentlemen, I find that the election of officers, with the exception of the President, should be first in the order of business of the House of Delegates after the reading of the minutes.

#### Cooperation of Bar Association

DR. TOMLINSON: May I take up one thing under new business? In connection with the report of the Committee on Criminology, it is requested that the President of this Society confer with the Bar Association and request the Bar Association to appoint three members of said Association to convene with the Committee of this Society relative to the adoption of those things which were promulgated in the report of the Committee on Criminology, as advocated by Dr. Tarumianz, and I so move.

DR. WALES: I would like to ask this question. From that special meeting of the House of Delegates, is this Society absolutely committed to the approval of the Social Security Act? We have approved it in principle. This is a regular meeting.

PRESIDENT NILES: If I understand the situation that has all been dropped by the United States Government.

DR. WALES: It has?

PRESIDENT NILES: Yes. Nothing doing.

DR. CHIPMAN: In regard to this railroad fare—

PRESIDENT NILES: There is a motion before the house. Is anyone going to second this motion made by Dr. Tomlinson?

DR. SAMUEL: I second the motion.

PRESIDENT NILES: Will you repeat the motion?

DR. TOMLINSON: Request the members of the Bar Association to appoint a committee of three to convene with the Committee of this body relative to the granting or the formulating of a committee whereby those things reported by the Criminology Committee can be obtained, as was requested in their report.

PRESIDENT NILES: You want the President of the Bar Association to meet—

DR. TOMLINSON: No, a committee of three from the Bar Association to convene with this Committee.

DR. TARUMIANZ: May I have the privilege of the floor? At the last annual meeting of the Committee I

suggested that the President request the President of the Bar Association to appoint three members of the organization to work out a plan by which the control of delinquency in this state can be established in a scientific manner. Now we are requesting the same thing.

PRESIDENT NILES: I see it now. I was merely a little twisted. You have heard the motion, which has been seconded.

...The motion was put to a vote and carried...

PRESIDENT NILES: The next order of business is the election of officers.

DR. CHIPMAN: May I ask a question? In regard to this railroad fare and \$5 per day for expenses, that is all right for this coming year. It will die by its own resolution. The proper way, I think, to make it permanent is to place it in the By-Laws, and then we won't have to do the same thing over again next year.

SECRETARY SPEER: I know, but when it comes to sending a delegate to San Francisco we will forget it. We wouldn't be able to pay it.

DR. CHIPMAN: It is in Kansas City next year.

SECRETARY SPEER: Suppose it were San Francisco. This Society does not have the money. That would take at least \$500. This Society will not be in a position to stand it.

DR. CHIPMAN: The carfare is \$119 to San Francisco round trip, plus \$5 a day.

PRESIDENT NILES: Is there any other discussion?

DR. HEITEFUSS: Mr. President, I arise not to discuss the subject that Dr. Chipman is talking about, I would like to discuss something else.

SECRETARY SPEER: That motion has been passed.

PRESIDENT NILES: It is out of order to discuss that question; he has another matter for discussion.

#### New Charity Clinics

DR. HEITEFUSS: I would like to talk briefly upon new activities of the State Board of Health in this city. This being a state meeting, what I will say would bear upon the rest of the state as it is at present bearing upon what is happening in the city.

There is a movement afoot to establish a new state clinic in the ninth ward. I am not trying to make this a neighborhood affair, but that is where it is being attempted to establish a new clinic. This came about through the charitable thoughts of the Ninth Ward Businessmen's Association, a group of men who have undoubtedly charity as their fundamental but who do not understand our side of the question.

In the ninth ward there already is a clinic, the patients, I daresay, to the extent of eighty-five per cent being well-to-do patients, patients of doctors in this room, who may deliver their babies and so forth, but never see them after that because of one of the most unjust clinics that has ever been run in any state.

When I heard of this I got in communication with the President of this Ninth Ward Businessmen's Association and found out that Dr. Jost has already met the committee on the establishing of this clinic and talked things over. They have gone so far already as to look over locations for the clinic, so that the thing is in progress.

When it first came up there was no discussion. Unfortunately, not many doctors belong to that association. I asked for permission to speak about this new clinic. Unfortunately their next meeting is this coming Wednesday night, which is the reason why I bring this up at this time, because in the face of the unjust, unethical clinic now being conducted by the State Board of Health in the ninth ward, and in what I feel is a somewhat sneaky method of trying to form this new clinic without consulting regular physicians, I feel that I am rather duty bound to say something about this at this meeting Wednesday night. I feel also that whatever I might say would perhaps weigh more if I had an expression from this Society as being opposed to the establishment of a new State Board

of Health clinic anywhere in the state, unless that clinic or any clinic be thought to be necessary after it has been properly investigated, and provided it will have proper facilities.

DR. WALES: Will the Doctor elucidate a little more as to what this clinic is?

DR. HEITEFUSS: This clinic, as I tried to get it from the President of the Association—

DR. WALES: Is it to be a welfare clinic?

DR. HEITEFUSS: As I understand it, Dr. Wales, it is to be something like this Christ Our King Clinic. In other words, it will be primarily prenatal care, and feeding of babies after delivery. Dr. Jost did not pin himself down to that at all. He didn't say that it wouldn't take care of men, women, or children or what. He didn't say that they would have facilities to do this, that, or anything else. The Christ Our King Clinic, which is on 28th street, between Madison and Monroe streets, is taking pay patients away from physicians. I daresay in this room we have at least a half dozen doctors who are being robbed—in plain English, robbed—of some money week after week. I know of two cases of one doctor right in this room now whose cases have gone over there. You can deliver babies and that is the end of the case as far as you are concerned, and I can prove that many of these cases can pay a fee. In one case particularly that I am thinking of, the father hasn't earned less than \$65 a week for the past four years. I could go on and give you plenty of these cases, with their names, and the people will admit it, but what do they do? The state nurse or the state somebody walks in to the patient's house, shows her certificate and says, "Do you have a physician?" "Yes." "Why don't you come to the state clinic?" A patient told me this tonight. "Why don't you go to Christ Our King Clinic?" That patient went to Christ Our King Clinic and I haven't seen the patient until tonight, when he came for cold vaccine. I don't know what the baby looks like. When I told him he was going to an indigent man's clinic he was amazed and embarrassed. He said he wasn't told by the state nurses, or whoever runs that place, that he was supposed to be an indigent person.

My point is that that one clinic is the most damnable clinic ever run, and if new clinics are proposed through Dr. Jost getting up before a crowd of business men whose thoughts are charitable and who do not understand our side, before we know it they will have clinics all around, left and right, because Dr. Jost, in my opinion, is like many people who can see one thing and try to bring their one particular idea, whatever it is, to the front. Certainly unless they can prove the necessity, prove that they will have facilities, prove that they need a clinic, where we have four hospitals with established clinics that are fully able to study a case intensively, whereas these clinics do nothing more, many of them, than an ordinary examination and if there is anything unusual they cannot take care of it, it is economic waste. It is stealing my patients and yours without an investigation as to whether or not they can pay, and that is the reason why I am saying tonight for an expression on this question.

DR. BIRD: Mr. Chairman, I don't like to take the floor so often, but Dr. Heitefuss has brought up an important question. It happens to be a question that this House has passed upon before. If I recall correctly a resolution was approved unanimously by the House of Delegates a few years ago to the effect that we did not approve of the establishment of any more clinics of any kind in the state of Delaware. I think it is only fair to the Doctor to put him in the position to state that this Society reiterates that stand.

It is demonstrated that the clinic is not needed. It amazed me that Dr. Jost, the Secretary of the Board of Health, seems to be engineering the medical side of it without conference with the local county



society that would have jurisdiction. Dr. Jost has expressed on this floor several times his desire to play ball according to the rules. Apparently this looks like a move that we are not acquainted with.

I move that this Society reiterate its previous stand that it is opposed to the establishment of any new clinics.

DR. WALES: In rising to second the motion, I would like to say that Dr. Bird's memory is absolutely accurate. We took that action at Dover several years ago. I second the motion, and I would like to state that I don't think Dr. Heitefuss has overdrawn the situation in the slightest degree.

DR. SAMUEL: Mr. President, Dr. Jost is not here and I feel that in justice to him it should be stated that we don't know what Dr. Jost's ideas are or what he has expressed to these people, and I don't think the Doctor knows, and it looks to me as if we are condemning Dr. Jost. I remember that at Dover I was one of the advocates of the idea that no more clinics should be established, that our hospitals are perfectly capable of taking care of any other clinic centers that we may need. But I do object to condemning a man who is not here to defend himself, and I don't believe that Dr. Jost has gone as far as the Doctor thinks he has.

PRESIDENT NILES: Is there any more discussion?

DR. VOSS: I certainly concur with what Dr. Heitefuss has said concerning this clinic. I think I know a little about the clinic that is proposed. There is a nurse at the lower end of the ninth ward, Mrs. Collins, who has had a welfare home, or something of the sort, for girls, a recreation place, I believe. It seems she has been agitating a health clinic in that section, and of course the Ninth Ward Businessmen's Association is a group that make themselves interested in anything that they consider is for the benefit of the ninth ward. I think both Dr. Heitefuss and myself are members of that organization. Those men met some time ago, I know, with Dr. Jost, and it was my impression, although I wasn't at that meeting, that the clinic was to be located in the lower end of the ward, which is the east end, down there among a considerable number of poor people.

But as far as the clinic at Christ Our King is concerned, I heard a druggist say a few years ago that he happened to pass the place and he counted twenty-eight baby coaches lined up there and he said they were fine looking coaches. So it is quite apparent that the clinic over there at the church certainly is catering to a rather wealthy group of people.

PRESIDENT NILES: Undoubtedly.

DR. WALES: Under whose auspices is the clinic at Christ Our King held?

DR. HEITEFUSS: The State Board of Health. They don't give five cents for the use of the clinic room which was presented to them by the pastor of the church, but they take the doctor's money from the patients that come in.

PRESIDENT NILES: As President of this Society I want to state that although the State Board of Health is one of the most important things of our state as far as the health of the laity is concerned, on the other hand the medical profession is far greater. Without the medical profession the health of our country would be in bad shape. I do feel by the experiences that we have had with the aggressiveness of the State Board of Health without taking into consideration the knowledge of health conditions by doctors, we have disturbed doctors, mentally, financially, and every other way. I feel that the time is here when the State Board of Health and the medical profession should get together and define a permanent line wherein to stop the aggressiveness of one as well as the other, because I can only see from the last four or five years nothing but chaos as far as the pleasant relations between the State Board of Health and the medical profession are concerned, unless there is a better understanding

brought about immediately. I, as well as the other doctors, can cite many instances, not only in Wilmington but all up and down the state, where the doctor has been thrown in a very embarrassing position by the extreme aggressiveness of those who are thinking they are carrying on the proper duties of the State Board of Health.

DR. BIRD: As the maker of the motion I have a right to speak once on my motion. The fundamental activities of a State Board of Health are four or five, and, as I see it, beyond that they should not go.

It is the function of the State Board of Health to collect vital statistics. It is the function of the State Board of Health to control communicable diseases. It is the function of the State Board of Health to regulate the food, milk and water supply. It is the function of the State Board of Health to disseminate health education to the laity. Beyond that I can't see where they have a right to function, certainly as pertaining to the actual examination and treatment of the public at large.

PRESIDENT NILES: The embarrassing situation in which we find ourselves is this: any protest that we make is taken by the laity as selfish and mercenary. But that is wrong, and any publicity we get along those lines must not be construed that way.

DR. CHIPMAN: The reason it might be well to have a committee to see Dr. Jost is just to confer with him to see how far he has gone.

DR. BELL: Don't we have a Committee on Medical Economics, and why does not this resolve itself into a question to be settled by the Committee on Medical Economics?

PRESIDENT NILES: I think it is the business of the incoming President to see that these questions are put in the hands of the proper committees and that they function.

DR. MACCOLLUM: The incoming President doesn't go into office until the first of the year.

DR. WALES: The Committee on Medical Economics is functioning right now. I move this whole matter be referred to them to take immediate action.

PRESIDENT NILES: There is a question before the house. You have heard the motion of Dr. Bird which has been seconded.

MEMBER: What is the question?

PRESIDENT NILES: Dr. Bird, will you restate your motion?

DR. BIRD: My motion was that we reiterate the stand taken by the House of Delegates that we are opposed to the establishment of any new clinics.

...Dr. Bird's motion, which had previously been seconded, was put to a vote and carried...

DR. WALES: I think the whole matter should be referred to the Committee on Medical Economics to be taken up at once.

PRESIDENT NILES: I assure you action will be taken right away.

### X-rays For Tuberculosis

DR. BURNS: There is another matter which pertains indirectly to the Board of Health. Some two or three years ago the Medical Economics Committee of the New Castle County Medical Society passed a resolution objecting to certain physical examinations and certain x-ray examinations made of patients applying to the Brandywine Sanitarium and other clinics established by the Brandywine institution and saying that they should be confined only to indigent patients. I move you that this Society approve the action of the New Castle County Medical Society some time back indicating that only indigent patients should be examined free and that patients able to pay should be referred to private practicing physicians.

...The motion was seconded...

PRESIDENT NILES: You have heard the motion. I guess there is no discussion.

DR. L. D. PHILLIPS (Marshallton): I haven't the



statistics, but I believe that six out of six of the patients in the last year have been referred by family physicians. I won't say six out of six, but the vast majority.

PRESIDENT NILES: Even at that there would be no harm in having that motion go through.

DR. PHILLIPS: No. It is perfectly agreeable to me.

PRESIDENT NILES: You have heard the motion.

DR. TOMLINSON: Dr. Wales's motion hasn't been acted on yet.

DR. WALES: The Medical Economics Committee is functioning. I don't think that that motion needs to be put.

...The motion made by Dr. Burns was put to a vote and carried...

DR. McELPATRICK: I would like to make the motion that the reports of the Special Committees be accepted and the committees discharged with thanks. That gives the incoming President an opportunity to select his own committees, otherwise they hang over.

...The motion was seconded...

DR. TARUMIANZ: Before that motion is put, Dr. Speer has just reminded me of something. I hope that this motion of Dr. Burns does not apply to the patients who are admitted to the Delaware State Hospital. Naturally among the patients admitted to the Delaware State Hospital there are very wealthy people. It might be your child or my child. Everyone is x-rayed who appears there, and naturally no charges are made. That is why the hospital possesses x-ray equipment. In other words, we cannot diagnose the case without x-raying, or cannot send our patients, our mental cases, to Dr. Burns or Dr. McElpatrick for x-ray.

DR. BURNS: But you do make a charge to the patient who is able to pay.

DR. TARUMIANZ: No, we are charging so much and the private patients pay so much.

DR. BURNS: But they are paying for it directly or indirectly. They are private patients.

PRESIDENT NILES: There is a motion before the house, made by Dr. McElpatrick, that we accept the reports of the Special Committee and discharge them with a vote of thanks.

QUESTION: How can they continue to function if we discharge them?

SECRETARY SPEER: We discharge them as of December 31st.

...The motion was put to a vote and carried...

PRESIDENT NILES: The next thing in the order of business, gentlemen, is the report of the Nominating Committee. Dr. Mullin!

#### Report of the Nominating Committee

DR. MULLIN: Gentlemen, you think this is a very easy committee, but I think it is one of the hardest ones I have ever been on. I want you all to know that Dr. MacCollum and Dr. Fooks and I were on the committee, and as far as we are concerned there is nothing personal in it at all. You hear a lot of people say the medical society is run by politics, and I want you to be convinced there is no politics in this whatever. I really mean that from the bottom of my heart. If anybody can prove that there is, I will give them a hundred dollars tonight. We gave this a great deal of consideration last night and tonight. I had a great deal of pleasure in being with these gentlemen. It is pretty hard. The committees are all so limited and there are so many people you would like to put on them and you can't. The people who do the active work are the ones we want on the committees.

In regard to the First Vice President, they chose a certain man who I think is too young. For First Vice President I think we ought to have a man who has been a member of this Society for a great many years. I am only speaking for myself now; I will read the Committee's report in a minute. The two

men I suggested were Dr. M. I. Samuel and Dr. C. P. White. The man nominated is Dr. M. I. Samuel of Wilmington, for First Vice President.

For Second Vice President, Dr. C. G. Harmonson, of Smyrna.

For Treasurer, Dr. Leon Heck, of Wilmington.

For Secretary, Dr. William H. Speer, of Wilmington. I want to say a few words about that. We feel that Dr. Speer has given a great deal of his time to this. There might be some criticism about that, but I think that Dr. Speer is in the harness now and the idea of changing from time to time I think is very foolish. Dr. Speer knows the work and the whole committee was unanimous in thinking he is the man for the job.

For Councilor we suggest Dr. J. D. Niles. The other two men whose time overlap are Dr. Bruce Barnes and Dr. James Martin.

For the Committee on Scientific Work we suggest Dr. William H. Speer, Dr. W. T. Chipman, of Harrington, and Dr. James Beebe, of Lewes, as Chairman.

For the Committee on Public Policy and Legislation we suggest the incoming President and Secretary, Dr. I. J. MacCollum, of Wyoming, as Chairman; Dr. William Marshall, of Milford, and Dr. John H. Mullin, of Wilmington.

The Committee on Publication. I want to say a few words about that. You have a very able Editor, and from what I understand a very astute Business Manager. Without these two men I am going to mention, I don't think we would have a medical journal in this Society. So the Nominating Committee suggests Dr. W. E. Bird, of Wilmington, and Dr. M. A. Tarumianz, of Farnhurst. The third member is the Secretary of the Society.

For the Committee on Medical Education we suggest Dr. E. R. Mayerberg, of Wilmington, as Chairman; Dr. William Marshall, Jr., of Milford, and Dr. J. Kendall Hoeker, of Millville. The reason we suggest Dr. William Marshall, Jr., is because he is on the State Board of Examiners, and we feel that on the Committee of Medical Education we should have a man from the Medical Examining Board.

For the Committee on Hospitals we suggest Dr. Lawrence Jones, of Wilmington; Dr. Stanley Worden, of Dover, and Dr. Richard Beebe, of Lewes, as Chairman.

For the Committee on Necrology we suggest Dr. E. R. Steele, of Dover, as Chairman; Dr. Burton Pearson, of Newark, and Dr. R. B. Hopkins, of Milton.

The names to be submitted to the Governor for the Examining Board (the first five I read are already on the Board) are: Drs. O. S. Allen, T. H. Davies, William Marshall, Jr., Joseph McDaniel, John H. Mullin, J. D. Niles, W. E. Bird, W. C. Deakyne, Bruce Barnes and J. R. Elliott.

Respectfully submitted,

JOHN H. MULLIN,  
I. J. MACCOLLUM,  
CARLTON FOOKS.

PRESIDENT NILES: You have heard the report of the Nominating Committee. What is your pleasure?

...Upon motion regularly made and seconded it was voted that the report of the Nominating Committee be accepted...

PRESIDENT NILES: Is there any other nomination from the floor?

...Upon motion regularly made and seconded it was voted that the nominations be closed...

...Upon motion regularly made and seconded it was voted that the Secretary cast the unanimous ballot of the Society for the men nominated in the report of the Nominating Committee. Secretary Speer cast the ballot and President Niles declared the men elected...

SECRETARY SPEER: Gentlemen, we have a record here of the Society that starts back in 1906. It is

the combined minutes and all of the doings of the Society. It has the Treasurer's Reports. It is all in longhand, and as you can see it is pretty well worn. I think it would be a good thing to put this book along with the Treasurer's book that we gave to the Academy last year.

DR. BIRD: Was it given last year, or loaned? I think it was loaned for safe keeping.

SECRETARY SPEER: It is something that is very easily lost, and I think some of the fellows a hundred years from now would find it interesting.

DR. McELPATRICK: I move it be loaned to the Academy.

...The motion was seconded, was put to a vote and carried...

PRESIDENT NILES: The next order of business will be resolutions.

SECRETARY SPEER: I have none.

PRESIDENT NILES: Does anybody have any resolutions?

DR. WALES: The Necrology Committee has a sketch of each man who has died, and when we get them I think they ought to be included in the minutes of the Society. I think Dr. Jones, of Laurel, is the Chairman of that Committee. They probably will arrive by mail.

PRESIDENT NILES: That is true. I think the Secretary should take care of that.

DR. TOMLINSON: It seems to me that it is incumbent upon this Society to take cognizance of the impaired health of a man from Kent County who has been a regular attendant of these meetings, and that is Dr. James Martin, of Magnolia. I move that the Society go on record and that a resolution of sympathy for his impaired health and best wishes for his recovery be sent in the proper form.

...The motion was seconded by Dr. Bird, was put to a vote and carried...

PRESIDENT NILES: The next order of business is communications.

...Secretary Speer read a letter from the Philadelphia County Medical Society dated October 4, 1935, as follows:

The Philadelphia County Medical Society has formally invited the American Medical Association to arrange to bring the 1937 Annual Session of the American Medical Association to Philadelphia, as the guest of the Philadelphia County Medical Society.

At the annual meeting of the Medical Society of the State of Pennsylvania, held during the past week, the State Society unanimously endorsed this project.

As President-elect of the Philadelphia County Medical Society I bespeak your endorsement of this invitation, and trust that you will instruct your delegates to urge the officers of the American Medical Association to accept this invitation.

Will you kindly advise me what action is taken.

Yours sincerely,

Francis Ashley Faught, M. D.

SECRETARY SPEER: Will somebody move that we endorse that?

DR. WALES: I move we endorse that.

...The motion was seconded, was put to a vote and carried...

...Dr. Speer read a letter from the American Medical Association, dated August 20, 1935, referring to the University Extension Debates this winter on the socialization of medicine.

SECRETARY SPEER: Does this Society want to go on record as being opposed to this subject or anything of the sort? That is for you to discuss now. The subject for debate is "Resolved: That the several states should enact legislation providing for a system of complete medical service available to all citizens at public expense."

DR. SAMUEL: From whom does that letter come?

SECRETARY SPEER: The American Medical Association's Bureau of Medical Economics. It is signed by Dr. R. G. Leland, Director of the Bureau of Medical Economics.

DR. BIRD: It is just stating the fact that some other organization proposes the debate. To get it off the program I move that the Secretary be authorized to distribute material to those who are interested or see that they are put in touch with the A. M. A., in connection with this matter.

SECRETARY SPEER: May I interrupt? Dr. Leland says he believes that the state medical societies should endeavor to assist the debaters in securing the most dependable material on the subject, and an accurate understanding of the medical profession as represented in the official action of the House of Delegates.

DR. BIRD: Our House of Delegates has gone on record as being opposed to health insurance, so we are on the negative side of the debate, and if the American Medical Association has literature to distribute to the high schools of this city I know of no one closer in contact with it than the Secretary. So my motion stands, that the Secretary be the authorized agent of the A. M. A. in the distribution of this material.

...The motion was seconded by Dr. McElpatrick, was put to a vote and carried...

...Secretary Speer read a letter from the Birth Control League of Delaware, dated September 14, 1935, referring to a regional conference in Baltimore on November 16, 1935...

SECRETARY SPEER: Do you want to take any action on this subject?

DR. WALES: I move it be received and filed.

...The motion was seconded, was put to a vote and carried...

SECRETARY SPEER: We need a motion that all expenses incident to this meeting shall be paid by the Treasurer.

PRESIDENT NILES: I will entertain a motion that all expenses incurred for this meeting shall be paid by this Society.

DR. WALES: I make that motion.

...The motion was seconded, was put to a vote and carried...

PRESIDENT NILES: Will somebody make a motion to approve the Scientific Program as printed?

DR. McELPATRICK: I make that motion.

...The motion was seconded by Dr. Bird, was put to a vote and carried...

PRESIDENT NILES: The next order of business is the selection of the next meeting place. Dr. Fooks is here and Dr. Marvel, from Sussex. Where do you live?

DR. MARVEL: I am in Kent, across the creek. I belong in Kent. I should think Georgetown would be the best place. I make a motion that the next meeting place be Georgetown.

DR. FOOKS: I would suggest Georgetown.

...The motion was seconded by Dr. Hocker, was put to a vote and carried...

PRESIDENT NILES: We are now down to miscellaneous. Has anyone anything to bring up?

If not, I proclaim this meeting of the House of Delegates, the one hundred and forty-sixth annual session, is adjourned.

...The meeting adjourned at eleven-fifty o'clock...

## HOUSE OF DELEGATES October 9, 1935

A post-session meeting of the House of Delegates was held at the Delaware Academy of Medicine, Wilmington, on October 9, 1935, at 1 P. M., with President Niles in the chair.

PRESIDENT NILES: We have one more important question. I learn it is the desire of the men in the Southern part of the state to change the meeting place of the next convention. I will leave that to the incoming President to explain, Dr. Joseph B. Waples, of Georgetown.

PRESIDENT-ELECT WAPLES: In regard to the meeting place next year, I believe the House of Delegates decided on Georgetown. Georgetown is my home town



and we would be very glad to have you all, but we feel it would be much better if we could move the meeting up, if possible, to some time in September (we have had it the latter part of September before) and have the meeting at Rehoboth.

DR. PRICKETT: Unless it is the desire of the Sussex County members I would rather meet in Georgetown.

DR. McELPATRICK: Is there any objection to having it in Rehoboth in October?

PRESIDENT-ELECT WAPLES: The only thing is that the hotels are not open.

DR. McELPATRICK: The reason I mentioned that—you fellows are not as old as I am—is that several years ago when we had one or two of our meetings in Rehoboth I remember we didn't have a quorum. That was the year Dr. Bastian was President. That is the reason I am objecting to the meeting in the month of September. There are other meetings then. I think if we take them there in the cold weather there won't be so many sports there.

PRESIDENT-ELECT WAPLES: The reason for the objection to Georgetown is that we haven't the hotel facilities there.

DR. R. C. BEEBE (Lewes): I would like to know what meeting in September would conflict with it. The American College of Surgeons meets in October. I think if we meet some time between the fifteenth of September and the first of October we wouldn't have to bother with the amusements, and the Country Club at Rehoboth would be an ideal place to meet.

PRESIDENT-ELECT WAPLES: The Carlton is open any way.

DR. BEEBE: Yes, the Carlton is open.

SECRETARY SPEER: If you put your meeting in September you are going to throw a very heavy load on your Program Committee. These men whom we ask to come here are nearly all connected with teaching institutions. The teaching institutions open anywhere from the twentieth of September to the first of October, and those men are so busy with the opening of the scholastic year that it is practically impossible for them to leave at that time. They do feel, however, that they can get away for an hour or two, or for a half-day, by the second week in October. We have had that experience on several occasions. Wasn't that true when you were in office, Dr. LaMotte?

DR. W. O. LAMOTTE (Wilmington): Yes. Some of the people couldn't get away on account of that.

SECRETARY SPEER: It puts a pretty heavy load on your Program Committee to get representative men if they are connected with teaching institutions.

PRESIDENT-ELECT WAPLES: It is the place rather than the time. The only thing about Rehoboth is that most of the hotels are closed by the end of September. I believe the Carlton does stay open. Do the Sussex County members see any objection to having it in October?

DR. B. M. ALLEN (Wilmington): The American X-Ray Society meets the last week in September and we wouldn't be able to attend.

PRESIDENT-ELECT WAPLES: Would it be possible for the Sussex County members to decide later on that and notify the members?

DR. TARUMIANZ: I move that the Sussex County Medical Society have charge of that meeting, and let them decide as to the date of the meeting and the place.

...The motion was seconded...

SECRETARY SPEER: They will have to decide by the first of February.

PRESIDENT-ELECT WAPLES: We will decide within a month.

SECRETARY SPEER: That will be fine.

DR. BIRD: As far as the motion is concerned, it is out of order for the Sussex County Medical Society to set the time and place of the meeting. That is the function of the House of Delegates, but I do believe that the House of Delegates should defer as much as

possible to the Sussex men. I would suggest that they decide what they would like to have, and then it is an easy matter to have a special meeting of the House of Delegates or take a poll by mail.

SECRETARY SPEER: The General Meeting can change the House of Delegates.

DR. TARUMIANZ: I understand that the Society itself is above the House of Delegates. The Delegates are our representatives only.

DR. BIRD: It is up to the President to say that the business of the House of Delegates shall be decided by the House of Delegates.

PRESIDENT NILES: That is true, but we have a General Meeting.

DR. O. S. ALLEN: I don't know, it seems to me in the past the custom has always been if we meet here the men here usually select the place. If we meet in Kent it is up to the men there. If we meet in Sussex it is up to the men there. It seems to me the men in the county where we are going to meet certainly should be the deciding factor. In other words, I think the men in Sussex should decide it. We should take their word for it. We always have.

PRESIDENT NILES: It has been customary in the past to acquiesce to the wishes of the incoming President and to have the meeting in the locality which he desires.

DR. PRICKETT: I make the motion that the Entertainment Committee be instructed to select the time and the place, with full power to act.

DR. LAMOTTE: Mr. President, I would support Dr. Bird's stand, because when I was Secretary the same question came up. It is the same principle that the Congress of the United States is not as great as the whole American nation, but the American nation has not the power except through due process as provided in the Constitution of changing the decisions of Congress. I took that question up with the officials of the American Medical Association as a point of parliamentary law and they supported me—Dr. Fishbein and several others. That is what we have the House of Delegates for. If that was not true, as I have seen happen in medical meetings, everybody would leave, with the exception of two or three people, and you could pass anything over the head of the House of Delegates. That is a protection.

PRESIDENT NILES: Under the circumstances, what is your suggestion? You have had a good deal of experience.

DR. LAMOTTE: To be really legal I think we should do as Dr. Bird suggests.

PRESIDENT NILES: What is your suggestion?

DR. BIRD: I suggest that we leave the time and place of the meeting to the Sussex County Medical Society, and a subsequent special meeting of the House of Delegates can officially adopt the plan desired that way. It is a technicality, but I believe it should be done.

DR. TARUMIANZ: There is a motion before the house. Dr. Prickett's motion.

DR. PRICKETT: I made the motion that the Entertainment Committee be instructed to select the time and place of the next meeting with full power to act.

...The motion was seconded by Dr. O. S. Allen, was put to a vote and carried...

MEMBER: I don't believe it ought to be the Entertainment Committee. I think it ought to be the Sussex County delegates.

DR. TARUMIANZ: The incoming President realizes the importance of the meeting being in October. It is entirely up to them to decide, considering that our roentgenologists will not be able to attend the meeting in September, and also considering that we could not obtain the so-called "foreign" speakers for papers. That is all that it is necessary to add to our decision.

PRESIDENT NILES: I don't think it is necessary to have any further discussion.

...The meeting adjourned sine die at one-thirty o'clock...



# EDITORIAL

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W. EDWIN BIRD, M. D. .... Editor  
Du Pont Building, Wilmington, Del.

WILLIAM H. SPEER, M. D. .... Associate Editor  
917 Washington St., Wilmington, Del.

M. A. TARUMIANZ, M. D. .... Associate Editor & Bus. Mgr.  
Du Pont Building, Wilmington, Del.  
Telephone, Wilmington, 4368

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No. 12

### ALMOST OF AGE

With the current edition of THE JOURNAL the present editor completes his twentieth year of service. Many of our older members will recall the first issues, which appeared in 1910, with Dr. Harold L. Springer as editor and Dr. Joseph W. Bastian as business manager. This was a monthly of four to eight pages. In 1914 Dr. Springer was succeeded as editor by the late Dr. Albert Robin, and by this time THE JOURNAL had grown to 16 to 20 pages, but still retained its pamphlet size. In January, 1916, the present editor became the acting editor, assisting Dr. Robin, who wished to be relieved of this task. In April, 1916, Dr. Robin retired from the editorship, and the duty of carrying on Delaware's medi-

cal journal fell upon our shoulders, where it has since remained.

Due to the stress of war times THE JOURNAL was published as a quarterly from January, 1918, to December, 1922. Following this, the Delaware journal was combined with the Pennsylvania journal and published again as a monthly under the title of the *Atlantic Medical Journal*, with Dr. Frank C. Hammond, of Philadelphia, as editor and the Delaware scribe as assistant editor. The business details were conducted by our Pennsylvania confreres entirely, Dr. Bastian severing his connection with our journal in December, 1922. The hopes of the two states in merging their journals—that the *Atlantic* might become the organ of several nearby states—did not materialize, and the arrangement was cancelled with the issue of September, 1928, each state having decided to resume publication of its own journal under the original titles.

Thus a new series of the DELAWARE STATE MEDICAL JOURNAL began in January, 1929, with the old Delaware editor back on the job, assisted by Doctors W. O. LaMotte and M. A. Tarumianz, who has also served as business manager. Dr. Tarumianz continues his services as business manager, but in January, 1934, Dr. LaMotte, whose services were ex-officio, was succeeded by Dr. W. H. Speer, the new secretary of the Society.

The new journal conforms in style and format to the other state journals: we are trying to make it compare favorably with them in interest and value, but to do this is not always as easy as it sounds, due chiefly to the limited membership of the Medical Society of Delaware, and to the absence in this state of any institution of medical teaching and research. Thus our resources are limited at the very outset, and not all of these twenty years in the harness can be described as a pathway of roses. However, the prick of the thorn only makes us notice all the more the beauty of the petal, and thus encouraged we shall continue our endeavors to help Delaware find its place in the medical sun. We can succeed in this attempt only if all our members will continue to give us their sympathetic support.

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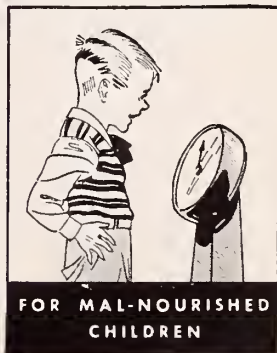
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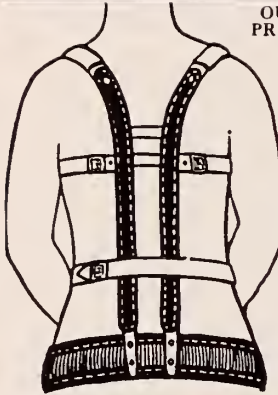
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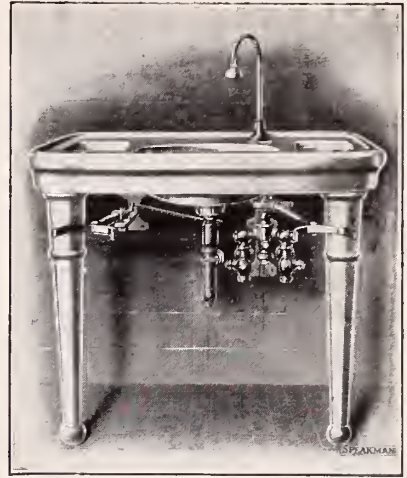
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The above illustration shows Speakman Knee-action Mixing Valve K-6020, Speakman Knee-action Pop-up Waste with Pop-up Plug K-6025, and Speakman Gooseneck Nozzle with Cast Brass Spray Head K-6045.

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